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ABSTRACT

Characteristics of Hispanic students referred for special education services during 1983-84 in several large urban school districts with large minority populations were examined. Also examined was the predictive ability of various statistical models with respect to the eventual diagnostic outcomes of the students. File data were collected for 1,319 Hispanic students in grades K-12, with the analyses focusing on the 1,154 elementary students. Findings showed that the majority of the referrals were in the early elementary grades, were male, and were born in the United States, while the majority of parents were born in Mexico. Most frequent reasons for referral were low academic achievement and reading problems, followed by poor oral skills. The most frequent eventual diagnostic classifications were learning disabled (63% of the sample) and language impaired (20%). A predictive analysis using path analytic procedures examined factors leading to eventual classification, and accounted for about 40% of the variance in the dependent variable. In addition, there appeared to be two "tracks" leading to the eventual classification, one for diagnosis of learning disabilities and one for diagnosis of language impairments. Appendices include the data collection instrument, a codebook for variables, and descriptive profiles of participating school districts. (JDD)

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FINAL REPORT—LONGITUDINAL STUDY I REPORT

An Examination of Special Education Decision Making with Hispanic First-Time Referrals in Large Urban School Districts

Robert Rueda, Desdemona Cardoza,
Jane Mercer, and Linda Carpenter

Submitted to the U.S. Department of Education
Office of Special Education Programs

Contract No. 300-83-0273

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Abstract

The present investigation was an attempt to examine the characteristics of Hispanic (including limited-English proficient) students referred for special education services during one school year (1983-84) in several large urban school districts with large minority populations. In addition, an attempt was made to examine the predictive ability of various statistical models with respect to the eventual diagnostic outcomes of students in the sample.

Since one of the specific interests in this study was to examine the referral, assessment, and placement outcomes of large districts in the Southwest with sizable populations of LEP/NES children who potentially qualify for special education, districts selected for participation had to meet two criteria. These included 1) the size of the district (10,000 or more total enrollment), and 2) the numbers of Hispanics enrolled in special education placements for the mildly handicapped (200 or more Hispanic students in EMR and LD placements). Based upon these criteria, three districts were selected. In addition, a fourth, extremely large school district, which was divided into eight separate, relatively independent, administrative regions was included in the study. Five of the administrative regions from this large district participated in the study, and were considered as "districts" for the purposes of analysis.

File data in each of the school districts was collected for all Hispanic students who were referred for special education placement during the period July 1983 through July 1984 in each of the participating districts. A comprehensive data collection instrument was developed in order to record all data regarding background characteristics (family information, language background, etc.), referral information, assessment data, IEP meeting information, and diagnostic and placement decisions. This data was gathered on a total of 1319 students ranging in grade from K to 12. Because the vast majority of the students for whom data was collected were elementary school students, the present analyses focused on that group of students.

Descriptive information on the school districts in the study suggested that the majority of the referrals were in the early elementary grades, were male, and were forn in the U.S., while the majority of parents were born in Mexico. Virtually all of the students spoke or were exposed to either Spanish only or bilingual home environments, but only about a fifth of the sample had been in ESL or bilingual classes prior to referral. About a third of the sample was classified as Fluent-English Proficient by the schools. Few of the students had significant early medical problems, although pre-referral grades were low and in many cases previous use had been made of the resource specialist program before an "official" referral.

The most frequent reasons for referral were low academic achievement and reading problems, but about 22% of the referrals were for poor oral skills. The most common assessment instruments used in assessment were the WISC-R and the WRAT. Over half the sample was

assessed in English only. The most frequent eventual diagnostic classifications were learning disabled (63% of the sample) and language impaired (20% of the sample). Together, these two categories accounted for over 80% of the total classifications.

A predictive analysis using path analytic procedures was used to examine the factors leading to an eventual classification as learning disabled or language impaired. The constellation of factors in the model accounted for about 40% of the variance in the dependent variable. In addition, there appeared to be two "tracks" leading to the eventual classification, one for diagnosis of learning disabilities and one for a diagnosis of language impaired. Interestingly, the final path model accounted for 40% of the variance in spite of the absence of individual assessment data such as IQ scores, test data, grades, etc. The results were discussed in terms of previous research on second language acquisition and educational decision making.

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FINAL REPORT--LONGITUDINAL STUDY I REPORT

Examination of Special Education Decision Making with Hispanic First-time Referrals in Large Urban School Districts

Introduction

Educational practice with language minority children in American public schools has been historically problematic. For example, there are a number of indicators such as grades, dropout rates, teacher evaluations, scores on standardized tests, etc., that reflect underachievement and academic failure on the part of linguistic minority students (Duran, 1983; National Commission on Secondary Education for Hispanics, 1984; Hispanic Policy Development Project, 1984). Although the exact causes of this diminished level of achievement continue to be debated by social scientists, there is little debate regarding the validity of the indicators.

The relatively recent attention to the participation of language minority students in special education reveals that educational practice in this domain has been no less problematic (Mercer, 1973). There are a number of complex issues related to the education of language minority students suspected of being handicapped which have been brought to light primarily through court cases involving placement of these students in special education (e.g., Larry P. v. Riles; Diana v. State Board of Education). For example, charges of discriminatory placement practices reflected in disproportionate representation of minorities in special programs, charges of the negative impact of categorization and labeling, and charges of biased assessment practices and procedures are among the crucial issues that have received a great deal of public scrutiny in recent years.

One of the consequences of the increased awareness of this problem has been a number of legal and policy changes at the federal, state, and local levels during the last ten years which deal specifically with educational practice related to minority (especially language minority) children. For example, federal law requires a larger role for the parent in the assessment and placement process. In addition, there are a number of safeguards designed to decrease the numbers of minority students inappropriately placed in special education when the reason for poor academic progress is due to unfamiliarity with the language and culture of the public schools. These include testing in the native language, consideration of cultural differences in the assessment process, etc.

At the same time that educational policy has been developed to attempt to address the unique needs of language minority students in the public schools, there have been sometimes dramatic changes in the types of students served in large inner-city public school settings. In some areas of the United States, for example the Southwest, there have been rapid changes in demographics due primarily to increasing immigration and to the movement of nonminority students from inner-city to suburban schools. In light of these important changes, i.e., policy changes focused on language minority students, and rapidly increasing numbers of language minority students requiring appropriate educational service, one interesting question is the manner in which districts in this situation are meeting this unique challenge.

I. Review of Related Research

The present study is an attempt to examine the referral, assessment, and placement activities of several large urban school districts with respect to Hispanic (including limited English proficient) children. In order to provide some context for the present research, an understanding of previous work on areas related to the study is necessary. Therefore, the discussion on the following pages is organized to provide a brief introduction to these issues in the following fashion. First, the issue of non-biased assessment will be addressed, as it has received a great deal of attention in the educational and psychological literature focused on minority students and represents a key point in the process of special education placement. Following this, the discussion will shift to the issue of disproportionate representation in special education placements, as it is considered to be one of the consequences of inappropriate assessment procedures. Next, the issues regarding the potential stigmatizing effects of categorization and labeling will be considered as this is one of the hypothesized consequences of inappropriate placement in special education. Finally, this section will conclude with a consideration of the previous research on decision making in educational settings.

Assessment Practices and Procedures

One of the major arguments by writers in the area of non-biased assessment is that standardized assessment instruments are culturally and linguistically inappropriate for use with language minority children since such standardized tests have been designed for and normed on populations of non-minority children. It is been further

argued that personnel who are not of the same linguistic/cultural background as a given minority student yet who engage in psychological and educational assessment lack the appropriate linguistic and cultural knowledge and sensitivity and consequently render inaccurate interpretations of observed behavior. It is important to note that although most of the attention has been focused on school psychologists engaged in psychological assessment, these issues are not unique to any one discipline but are similar across professional domains. Thus, issues of the adequacy and appropriateness of tests and testers apply equally to psychologists, speech-language specialists, and instructional personnel involved in the evaluation of children referred for special educational assessments.

In the late 1960's and early 1970's, members of various minority groups challenged traditional assessment and diagnostic decision making practices by bringing suit against various educational systems. School districts were charged with discriminatory action in the placement of minority children in special education programs. Resultant litigative decisions found standardized test procedures and instruments typically used by school districts for placement purposes to be racially, culturally, and linguistically discriminatory when test results were used as the sole basis for special education eligibility and placement decisions (Larry P. v. Riles, 1972, 1979; Diana v. State Board of Education, 1970, 1973; Covarrubias v. San Diego Unified School District, 1972). Although these cases, and others like them, resulted

in a general moratorium on the use of standardized IQ tests as the sole criterion for special education placement decisions, the Diana case (1970, 1973) was of particular importance for children from Spanish and other language minority backgrounds.

The Diana case was brought before federal court on behalf of Spanish speaking limited-English proficient students who's placement in special education classes for the retarded had been based on standardized IQ testing in English. The court ruled that determining the intelligence of children who are unfamiliar with the test's language or the culture that underlies the test items amounts to discriminatory assessment and decision making practice. The case resulted in a series of stipulated agreements which required school districts to (1) test children in their native language, (2) retest language minority children previously placed in special programs using non-verbal intelligence tests, (3) develop test norms applicable to specific ethnic groups, (4) develop plans for revised testing programs, (5) explain disproportionate representation of minorities in special education classes, and (6) develop transition programs to help students return to regular education classes after decertification as mentally retarded.

Heavily influenced by the litigation of the early 1970's, P.L. 94-142 (20 U.S.C. 1401 et. seq.) was designed to provide due process and a variety of other procedural safeguards intended to assure non-discriminatory assessment and placement practices for all children referred for psychoeducational evaluation in the public schools. Included in this set of comprehensive legal mandate are elements which have particular importance for the assessment of language minorities.

For example, there is a requirement that testing materials and procedures used for evaluating and placing students in special education programs be selected and administered so as not to be culturally or racially discriminatory. Further, procedures must be administered in the child's native language or mode of communication and must be valid for the purpose for which they are used. In addition, assessments must be conducted by credentialed personnel who are trained and prepared to assess cultural and ethnic factors appropriate to the student being assessed.

The non-baised assessment mandate at the federal level represents formal recognition of the problem of assessing language minority children. Prompted by such recognition, educators have attempted to rectify assessment and decision making errors relative to language minority handicapped children. One general type of responses has focused on the design of cultural and linguistically appropriate tests as well as on personnel preparation, but to date there are no simple solutions to such a complex problem. At any rate, an examination of non-biased assessment, especially for school-based practicioners, requires consideration of the purposes of testing, types of tests used, and interpretation of test results. Each of these will be briefly considered in the following sections.

Purpose of testing. Testing can be conducted for a variety of reasons. One major purpose relates to the institutional need for categorizing children in order to qualify them for special service and to qualify for categorical funding. Other purposes relate to the identification of suspected problems in a given child, planning of an individualized intervention program, and evaluation of intervention

outcomes. It quickly becomes apparent that there is a great deal of diversity regarding the possible uses of assessment data. With respect to this point, Plata (1982) has argued for distinguishing testing for categorization/placement purposes and testing for purposes of educational programming. Further, Bernal (1977) has emphasized that "testing is to be done with assessment in mind" (p. xii). Similarly, others have convincingly argued that assessment should involve a diagnostic-intervention process (Mercer & Ysseldyke, 1977) wherein historical-etiological information and currently assessable characteristics inform intervention plans which in turn lead to given levels of outcome. With language minority children, a complete diagnostic-intervention model incorporates all four elements. In operationalizing such a process, Tucker (1977) outlined a comprehensive individual assessment for possible mildly handicapping conditions and included a number of relevant information sources. Observational and other background data, language dominance data, educational assessment data, sensory-motor and/or psycholinguistic assessment data, adaptive behavior data, medical and/or developmental data, personality assessment data, and intellectual assessment data represent categories of information which should be included in a complete assessment of language minority children referred for special education placement. While such a proposed plan makes intuitive sense, whether a comprehensive model of assessment and all its components are used in practice is remains an open question.

Types of tests used. Results of a number of research projects (e.g., Matuszek & Oakland, 1979; Thurlow & Ysseldyke, 1980; Ysseldyke, Algozzine, Regan, Potter, Richey, & Thurlow, 1980) indicate that

decision makers from a variety of professional backgrounds tend to use a restricted set of information in making placement decisions. In general, achievement and intelligence test scores are the most frequently used sources of information.

Although IQ and achievement tests are used extensively in educational decision making, Ysseldyke, Algozzine, Regan, Potter, Richey, and Thurlow (1980) found that assessment personnel typically ignore the technical adequacy of tests in making diagnostic decisions about students referred for special education service. Ysseldyke, Algozzine, Regan, and Potter (1979) also found that the first instruments (usually the WISC-R or the Bender-Gestalt) selected for an assessment tended to be technically adequate whereas later selections lacked such adequacy. Across groups, professionals not only lacked information about test adequacy but they judged inadequate tests as technically adequate as well. Such findings suggest that assessment may be a routinized process influenced more by previous traditional practices and other everyday constraints such as time limitations than by consideration of the unique needs of each individual case.

Interpretation of results. Interpretation of assessment findings is a particularly important issue for language minority children since performance on standardized test instruments is frequently influenced by linguistic and cultural factors. A central issue is the validity of the test in question, since in the case of language minority children,

the question remains whether performance may be attributed to unfamiliarity with the language and culture represented in the test as opposed to the skills or abilities the test claims to measure.

One recent study with language minority children which bears on this question was reported by Cummins (1984). This study was designed in part to investigate "the ways in which psychologists and teachers decide whether an ESL child's problem was due to English language difficulties or to some type of learning disability" (p. 19-20). By noting student scores on the WISC-R and recommended placements, Cummins was able to infer the implicit reasoning in decisions made. He proposed a number of inferential paths related to how examiners accounted for linguistic and cultural minority background.

In general, it was concluded that decision making did not appear to take linguistic and cultural differences into account. Testing was typically conducted in English, and it was apparently assumed that because children had acquired enough English to converse in informal settings that psychoeducational assessment of learning abilities could be accurately conducted in English. On the occasions when non-English languages and cultures were considered in decision making, those factors were interpreted within a deficit model, and it was assumed that cultural and linguistic differences were the cause of learning problems.

Similar findings were reported by Matuszek and Oakland (1979) in their study of factors that influence decision making with language minority children. Their results indicated that psychologists most often base their decisions on IQ scores, achievement test scores, SES, and class achievement, whereas teachers base their decisions on class

achievement, test achievement, IQ, self concept, and adaptive behavior. Of most importance to the present discussion, however, linguistic and cultural factors did not contribute significantly to decision making by either group. It appears that in spite of non-biased assessment mandates, interpretation of child performances where cultural and linguistic differences are involved remains problematic.

One of the initial factors which led to an examination of the issues related to non-biased assessment was the disproportionate representation of minority students in special education classes. In addition, continued evidence regarding disproportionate representation has been used to suggest the failure to implement meaningful changes in assessment procedures on the part of school districts. The next section, therefore, briefly considers the work that has been done on the issue of disproportionate representation.

Disproportionate Representation

Charges of disproportionate representation of minorities in special education classes are based on the population parity notion that representation in special education programs should be in the same proportion as representation in the population at large. Mercer's (1973) landmark study in Riverside called initial attention to the disproportionate representation of Mexican-American and Black children in classes for the educably mentally retarded and she suggested that minority students were found in special education classes for the mildly handicapped at a higher than expected rate. Such findings have stimulated a great deal of public scrutiny through a number of lengthy court cases (e.g., Larry P. v. Riles; Diana v. State Board of Education) which resulted in various remedies to eliminate

disproportionate representation of minorities in special classes for the mildly handicapped. Litigation ultimately led to the passage and implementation of P.L. 94-142 (20 U.S.C. 1401 et. seq.) which was designed to protect the rights of all handicapped children referred for special services.

In spite of court orders to the contrary and the legal safeguards embodied in P.L. 94-142, representation of ethnic groups in some special education classes persists as a problematic issue (Comptroller General of the U.S., General Accounting Office, 1981; Twomey, Gallegos, Andersen, Williamson, and Williamson, 1980). The U.S. Department of Health, Education and Welfare, Office of Civil Rights Survey of Elementary and Secondary Schools (1978), yielded data which indicated that for the educably mentally retarded category, Asians, Hispanics, and Whites were underrepresented, American Indians were slightly overrepresented, and Blacks were sharply overrepresented. In the learning disability category, Whites were placed in almost exact proportion to the national average for the category, whereas Blacks and Asians were somewhat underrepresented, Hispanics were somewhat overrepresented and American Indians were sharply overrepresented. Finn's (1982) reanalysis of the 1978 OCR data supported charges of continued disproportion of minorities in special education on a national basis. In California, the State Department of Education recently reported continued disproportionate representation of Hispanic children in special education classes in several districts in the state.

In spite of the above findings, more recent OCR data (U.S. Department of Education, Office of Civil Rights, Civil Rights Survey,

1980; 1982), suggests that minorities are represented in programs for the mildly handicapped in almost direct proportion to their representation in the reporting districts. With respect to this point, Christenson, Ysseldyke, and Algozzine (1981) investigated factors related to referral for psychoeducational assessment and found that potential threat of litigation influenced the referral process. In general, educators were aware of legal implications surrounding disproportionate representation and actively responded by maintaining appropriate ethnic proportions in special programs.

Although such a finding explains recent proportionate ethnic representation, it is important to note that demographics reflect only population distribution, and relevant issues related to the quality of educational assessment and decision making for the purpose of appropriate service provision are overlooked. Achieving population parity certainly represents compliance with legal mandates but the process of educational decision making and appropriateness of placements remain unclear.

The concern with the issue of overrepresentation has received much attention from school administrators, parents, court appointed monitors, and others. One of the prime reasons for the interest in the the amount of representation of minority students in special education classes is directly related to the hypothesized negative consequence(s) of such placement. The most widely investigated of these potentially detrimental factors is the stigmatization due to labeling. The following section will briefly work on this topic.

Categorization and Labeling

The practice of labeling handicapped children has been the subject of considerable controversy in recent years. The controversy has

primarily focused on the potentially biasing and detrimental effects of labels on mildly handicapped children, including the stigma surrounding school-based labels. The most visible arena in which this controversy has been debated has been in the courts. As an example, allegations of the negative impact of labeling have surfaced in a number of court cases involving minority children (e.g., Diana v. State Board of Education; Larry P. v. Riles). One of the central issues is the decision regarding the point at which the possible benefits of special education placement are outweighed by the potentially stigmatizing effects of such a placement and the accompanying label. In the case of minority students, the courts appear to have largely accepted the arguments regarding the stigmatizing effects of certain categories of special education placement.

Althought many have argued about the potentially negative effects of labeling, others have suggested that the labels themselves are not inherently evil (Lieberman, 1980). Rather, it is how stereotyped thoughts and attitudes evolve from them that is at question, since labels function as metaphors for values and prejudices (Smith & Polloway, 1979). Clearly, the application of labels must exist in a given social context. In educational settings, the nature of labels can be viewed from several perspectives. In one sense, labeling represents one aspect of a larger administrative process. Children in need of special assistance outside of the regular classroom must be identified, referred, assessed, classified, and placed in appropriate educational programs. From this point of view, the label represents a summary statement, a resolution, of the classification process (Smith & Polloway, 1979). Further, classification of students from special

education serves as an administrative vehicle for providing service, since fiscal reimbursement to districts depends on categorical assignment (Gutkin & Tieger, 1979; Lieberman, 1980; Smith & Polloway, 1979). In this regard, classification and attendant labels serve the purpose of providing large amounts of money to local education agencies as well as creating an accountability base for state and federal governments (Gutkin & Tieger, 1979).

In addition to the administrative function, labels serve political purposes as well. By providing a common identity to a group of children, categories and labels provide points of reference for parents and advocacy groups (Gutkin & Tieger, 1979). Labels thus become the "tools of vested interest groups" (Smith & Polloway, 1979, p. 526) as a given group attempts to define reality from it's own perspectives.

Since labeling seems to serve a number of functions within an educational context, categorical judgements regarding the desirable or the undesirable consequences of labeling is unlikely to be a profitable undertaking. However, any discussion of labeling requires an understanding of the meaning and interpretation attached to a given label. The particular meaning attached to a label, which governs the educational response to that label, depends upon the operating models and theoretical conceptualizations which drive school-based practice. Therefore, the major models which have been used to describe such practice will be briefly outlined.

The most commonly used conceptual framework which operates in special education is based upon the medical model (Mercer, 1973). Within this framework, it is assumed that abnormalities are biologically-based, within-child characteristics. Such characteristics

are assumed to exist independently of whether they are recognized by others or not. In terms of practice, the medical model suggests that diagnosis should consist of a search for the underlying cause of abnormality, and that remediation should address the cure of the pathology identified. The model further assumes that abnormality is normally distributed in the population and identification of persons with various abnormalities stands as a statistical issue.

In special education, the medical model has contributed to practices designed to search for pathology, or to find confirming evidence in support of the reasons for referral (Mehan, Hertweck, & Miehls, 1983). Since treatment is prescribed in relation to identified pathology, remediation needs to account only for the abnormal condition identified. The act of labeling abnormality thus becomes the correct naming of an identifiable condition. Little concern is therefore focused on the impact of the label on individuals, since the label merely describes what the person in question. The ethical code of the medical model demonstrates relative lack of concern regarding labeling, namely overlooking a pathological condition is a more serious error than mistakenly suspecting pathology.

Although the medical model prevails in special education practice, much of the research designed to explore labeling implicitly assumes a competing conceptual framework, a social system model (Mercer, 1973). This model is based on the concepts of social organization and social control and assumes that abnormality is referenced in the expectations of a social system. Abnormality is thus seen as social deviance, or behavior which violates the norms of a particular social system, as opposed to an individual, invariant attribute. Since the judgment of

deviance is an interpersonal assessment regarding behavior, abnormality cannot exist unless it is recognized by the social system. Norms are not biologically based but are determined by value systems within a social and political process. In contrast to the medical model, falsely labeling a person as deviant is a more serious error than falsely labeling a person as normal. Within this framework the process of labeling as well as the social impact of such labeling are central concerns.

Although the medical and social systems models prevail in special education practice and research, an alternative model has been proposed. The pluralistic model (Mercer, 1973) was designed specifically to address the issue of ethnic diversity in educational decision making. The pluralistic model references judgements about normal and abnormal to a child's own sociocultural group. Under a pluralistic model it is assumed that all sociocultural groups have the same biological potential for learning but that sociocultural background has an effect on opportunity and motivation to learn. It is further assumed that existing achievement and intelligence tests measure only prior learning. In order to estimate a child's potential, assessment personnel must compare the child with others who have had the same opportunity and motivation for learning. The pluralistic model is completely culture bound in that children are ranked relative to their own sociocultural group. Consequently the model yields multiple normal distributions, one for each many sociocultural patterns. Scholastic potential is viewed as an attribute of the person but such potential can exist unrecognized since it must be revealed by holding sociocultural factors constant. Under a pluralistic model,

emphasis is on estimating learning potential, and underestimating a child's potential is a more serious error than overestimating potential.

Comprehensive reviews of research have been written regarding labeling in special education (e.g., MacMillan, Jones, & Aloia, 1974). It has been suggested that most of the research conducted in the area of labeling has been flawed by methodological problems and difficulties in isolating the effect of labeling from effects of other variables. Researchers have conceptualized their studies as investigations of labeling per se, but since most studies have been conducted in naturalistic classroom settings, the effect of the label is confounded by differences in class placement, student-teacher ratios, curriculum and the like (MacMillan et al., 1974). Consequently, little conclusive evidence has been demonstrated regarding the effect of labels on students, either directly in terms of changes in self-concept or indirectly in terms of other's reactions.

One aspect of labeling which has received some attention recently relates to the origins of labels within the process of referral for special education assessment. Mehan, Hertweck, Combs, and Flynn (1982) conducted a study consistent with a social systems approach to labeling and specifically examined the origins of categorical labels. They videotaped classroom events which included students who had been referred for psychoeducational evaluation. Once taping was completed, viewing sessions were held with the referring teacher. During viewing sessions, teachers provided information about their classrooms and the reasons why the target child has been referred.

Data derived from these viewing sessions were analyzed in terms of the type of reasoning teachers engage in and the implications of teacher reasoning for labeling children. From the data reported by Mehan et al. (1982), it appears that teachers respond to child behavior based on bureaucratically defined categories and procedures for processing students through the system:

> What starts as a "teacher's puzzle," a problem with the education of a child that cannot be solved immediately, becomes transformed and increasingly refined as it is represented by more and more stable institutional categories. When the teacher asks special educators for help, the "puzzling student" becomes a "referral student," a member of a loosely defined, but institutionally consequential category. With the administration of standardized tests and decisions by a placement committee, the "referral student" becomes a "learning disabled" (LD) or "educationally handicapped" (EH) student. The official category LD or EH becomes both a social fact about the child and an object with a fixed, stable meaning for the school. The official category takes on a life of its own . . . even though it is a social product of its own practices. Because official categories are divorced from the lived experiences of classroom life that spawned them, what starts as a specific learning problem can be transformed into a generalized deficiency. . . . Educators conclude that students who display "poor reading comprehension" must also have other academic deficiencies, poor peer relations, and a complex of other factors because these factors are institutionally associated with the specific learning disability (Mehan, Hertweck, Combs, & Flynn, 1982; p. 317).

It seems clear that the categorization and labeling process originates with a teacher who experiences difficulty in teaching some students. However, it is likely that individual differences in teachers' perceptions, tolerances, and attributional systems might also influence the extent to which they refer some children but not others. Such a notion has been supported by research in the areas of temperament (Thomas & Chess, 1977; Thomas, Chess, & Birch, 1968) and teachability (Keogh, 1982; Kornblau, 1979). For example, Thomas, Chess, and Birch (1968) suggested that behavior disorders arise when a child's temperament, or behavioral style, is mismatched with the environment in terms of expectations, attitudes, or resources. In a similar vein, Kornblau (1979) argued that teacher's judgments regarding the teachability of children relates heavily to child temperament and the interaction between children and teachers. In that regard, Keogh (1982) demonstrated that temperament accounts for approximately 50% of the variance in judgments of teachability whereas IQ accounts for less than 1%.

With respect to minority children, Ysseldyke, Algozzine, Regan, Potter, Richey, and Thurlow (1980) reported that educational decision makers have greater expectations that minority children will demonstrate handicapping conditions. Certainly such expectations could lead to differential referral patterns with language minority children that may be related to factors other than cognitive, intellectual or academic characteristics of the child. With respect to the models which have been described above, the labeling framework suggests that deviance (e.g., the designation "mental retardation") is determined as much by the social system in which the "deviance" is observed as by the

"deviant" behavior itself. On the other hand, the medical model framework suggests that deviance can exist undetected and is an inherent characteristic of the individual. In school based psychological and educational assessment, reliance on standardized tests which measure only child-based characteristics would suggest a medical model orientation. On the other hand, the inclusion of environmentally-based information would suggest a more social systems-based approach. Failure to take into account the special cultural and linguistic characteristics of students, as indicated by the predictive power of these variables alone with respect to diagnostic category or placement, would suggest the use of a medical model orientation in school practice.

Given the concern on the part of educational researchers as well as policy makers for the outcomes of educational decisions, especially with respect to minority students, it is important at this point to survey briefly the work which has been done in the area of educational decision-making. The following section, therefore, will present the major models which have been used to guide the work in this area, as well as some of the research which has been carried out.

Models of Decision Making

Special education practice, by necessity, has traditionally required that decisions be made about students to be served. However, interest in special education decision making has intensified in recent years, particularly since the passage and implementation of P.L. 94-142 (20 U.S.C. 1401). Governing special education procedure, the law formalized the decision process and mandated a series of steps for identifying and placing children in special education programs. As

noted earlier, at least part of the motivation for the passage of this legislation was due to the disproportionate placement of minority students in certain types of special education classes.

Within the parameters of the federal law are specific, outlined procedures regarding decisions about referral, screening, classification, identification, placement, instructional planning, pupil evaluation, and program evaluation. In addition to these decision points, one of the major elements of the mandate is that decision be made by groups or teams of educators.

The existence of mandated decision points in special education procedure provides an opportunity to examine how decisions are made by educators within the organizational context of the school. Such decision making assumes a position of major importance in the case of minority children since the accuracy and fairness of decisions made regarding students from minority backgrounds has been questioned (Mercer, 1973), as noted earlier.

In recent years, the field of bilingual special education has emerged as a service area to meet the needs of children who qualify for both special and bilingual education programs (Baca, 1980; Figueroa, 1980). One concern in bilingual special education is to guarantee language minority limited- or non-English proficient children the special education rights specified in P.L. 94-142, with particular emphasis on educational interventions which account for students' linguistic and cultural differences. Given the concern for the educational careers of minority and limited-English proficient students, identification and understanding of decisions made on their behalf becomes a critical element in the achievement of appropriate

service for children requiring bilingual special education service. One approach to work on decision making, including work in educational decision making, has been an examination of the models which can be used to guide decision making activities. The major models, and the ways that these have been applied to examine educational practices, will be examined next.

Rational models. Rational models evolved from classical microeconomic approaches to decision making that are intended to prescribe an analytic procedure for achieving a predetermined goal of profit maximization (Lee, 1971). Such models are designed to specify a logical problem solving sequence which includes: 1) defining a problem under consideration, 2) reviewing alternative courses of action available, 3) considering the consequences of various alternatives, and 4) selecting the alternative which will yield the best results (Duncan, 1973; Elbing, 1970; Hall, 1982).

Traditional rational decision making theory is based on the pre-specified objective of maximization. It is further based on assumptions of a rational decision maker who has complete knowledge of all possible sets of consequences as well as perfect knowledge of available alternatives and perfect knowledge of the consequences or payoffs associated with each option (Allison, 1971; Duncan, 1973; March & Simon, 1958). Given such assumptions, guidelines set down for decision making according to traditional theory will lead to selection of the maximum payoff in every case. Due to the assumption that all

alternatives and consequences are known and can be accounted for in decision making, traditional theory has been referred to as comprehensive rationality (Allison, 1971; Mehan, Hertweck, & Meihls, 1983).

Although comprehensive rationality approaches can account for decisions made under conditions of certainty and risk, such approaches cannot account for decisions made under conditions of uncertainty where all possible variations in decision conditions are not known (Duncan, 1973; Luce & Raiffa, 1957). Since conditions of certainty do not exist in most naturalistic situations requiring decision making, traditional comprehensive rationality may not be the most suitable for studying real life decision making (Duncan, 1973).

In response to the failure of traditional comprehensive rationality to account for decisions made under conditions of uncertainty, researchers have proposed theories of bounded rationality (March & Simon, 1958; Simon, 1957; 1972) as variations on traditional theory. In theories of bounded rationality the basic assumptions of traditional approaches are modified: The perfect knowledge assumption is rejected in favor of the recognition of man's inability to compile and compute all alternatives and associated outcomes in even a simple decision situation. Bounded rationality theory holds that an individual's capacities are restricted because it is impossible to know or be able to account for all possible alternative choices and their associated consequences (March & Simon, 1958; Simon, 1957, 1972). Further, the maximization objective of traditional comprehensive theory is replaced by satisfaction wherein a decision maker develops an idea of what constitutes satisfactory behavior and then searches

sequentially until s/he finds an alternative which equals or exceeds the satisfactory standards (Allison, 1971; Duncan, 1973; Simon, 1957, 1972).

Comprehensive rationality approaches tend to be used in economic and mathematical decision making situations whereas bounded rationality models are typically used in situations where heuristic methods are applied in searching for plausible satisfactory alternatives (Simon, 1972). Such situations include clinical problem solving and medical decision making (Elstein, Shulman, & Sprafka, 1978), and educational decision making where medical models frequently apply (Mehan, Hertweck, & Meihls, 1983; Potter, 1982).

In spite of believed applicability of bounded rationality models to educational situations, such models have not been used extensively in special education decision making research. Some researchers have deliberately rejected rational models on the basis of a belief that such formulations do not accurately apply to decision situations in special education (Ysseldyke, 1979). Other researchers (Mehan, Hertweck, & Meihls, 1983) have used rational models to guide the design of their work, but have concluded that formal theories of rational decision making do not apply to every day decision making in schools. Still other researchers (Fenton, Yoshida, Maxwell, & Kaufman, 1977) have used related portions of rational theory as a framework for designing legally based models of decision making in special education.

Legal models. P.L. 94-142 (as well as state and local policy making bodies) mandates a series of procedures which must be followed in educational practice with handicapped students. Based on mandated steps, some researchers (Fenton, Yoshida, Maxwell, & Kaufman, 1977;

Mitchell, 1980; Thouvenelle, Radar, Hebbeler, Brandis, Halliwell, Madar, & Hanley, 1980; Ysseldyke & Thurlow, 1980) have developed legal or procedural models of the special education decision making process and other researchers (Mehan, Hertweck, & Meihls, 1983) have interpreted their results within procedurally-based models.

Fenton, Yoshida, Maxwell, and Kaufman (1977) proposed a model of decision making for special education which was based on the notion that rational decision making involves defining the problem, generating alternatives, and selecting a solution. These decision making components were combined with a number of logical steps involved in minimally fulfilling decision making responsibilities specified by law to yield the proposed model of effective decision making in special education. The model consisted of a series of activities considered to reflect the three problem solving components of rational decision making. **Defining a problem** was reflected in contributing and interpreting information. **Generating alternatives** was reflected in proposing alternatives, suggesting student needs, using student needs as guidelines for judging alternatives, and suggesting instructional models. **Selecting a solution** was reflected in evaluating alternatives, participating in making a final decision or finalizing decisions, setting evaluation criteria, setting dates for review, and assigning responsibility for implementation.

In a similar vein, Ysseldyke and Thurlow (1980) developed a 15 step model of the special education assessment and decision making process. The model was developed from a review of literature regarding team decision making and IEP development but relied heavily on legally mandated procedures. The steps included in the model were pre-referral

interventions, referral, review of referral, appointment of assessment team, parental permission to assess, assessments, review of assessment results, eligibility determination, contacting parents after assessment, development of IEP, placement decision, parental permission for placement, development of strategies to implement the IEP, implementation of program, and progress evaluation.

Mehan, Hertweck, and Meihls (1983) interpreted the findings of their ethnogrpahic study of special education decision making within a legal/procedural framework. They described the process as moving through a series of steps including referral, consideration of referral, appraisal of need for assessment, assessment, re-appraisal, evaluation of need for placement, and placement.

Results of studies designed within a legal model framework universally demonstrate that mandated procedures are not followed in special education practice. Fenton et al. (1977), Mitchell (1980), Thouvenelle et al. (1980), and Ysseldyke & Thurlow (1980) all described the special education decision making process as ineffective when it was compared to procedures mandated by law. However, Mehan et al. (1983) suggested that it was "unnecessary to posit a gap between some ideal model and actual practice" (p. 285). Rather, they argued that there are a number of "good organizational reasons why institutional decision making occurs in the way that it does" (p. 285). Their suggestion that identifiable variables operate to constrain decision making in special education underscores the major weakness of legal models. Such models represent a set of procedural requirements that

lend themselves better to evaluative compliance checks than to explorations of factors that influence decision making in special education.

Information processing models. Information processing theorists have addressed decision making under the rubric of problem solving. Such theorists hold that "any task aiming to attain some goal constitutes a problem." Consequently a wide variety of activities, including special education diagnostic decision making, can be considered under information processing notions of problem solving. Further, because the focus in information processing approaches is on factors or variables that influence problem solving and decision making, such an approach is particularly useful in educational research designed to explore influences on decision making.

A basic assumption in all information processing approaches is that humans have a limited capacity to process information, particularly in the domain of memory. Consequently, decision makers actively select, organize, and synthesize information in an effort to compensate for limited capacity. Thus, rather than viewing selective processing of information as a breakdown in the process, this model proposes this selectivity as a normal and expected part of the activity. This selectivity would only be inappropriate if the selectivity in the decision making activity systematically and continously penalized certain students. In the case of minority students, for example, this selectivity might include ignoring linguistic and cultural considerations in the decision making process.

One model of problem solving in educational settings, from an information processing framework, has been developed by Shavelson in

his model of teacher decision making (Shavelson, 1978; Shavelson & Stern, 1981). (Recall that teachers most often represent the first link in the special education referral "chain"). Like other information processing approaches, Shavelson's model is based on the assumption that teachers are active agents who select, organize, and synthesize large amounts of information about students and about the instructional situation in order to make decisions about how best to teach particular children.

Included in the Shavelson model are important types of information that might influence teachers' decision making, including information about students, nature of the instructional task, and individual differences in teachers. Information about students, or child variables, include factors such as ability, behavior, participation, and background. Instructional task variables include factors such as subject matter, topic, and objectives. Teacher variables include factors such as beliefs, attitudes, and knowledge or concepts of subject matter.

The large amounts of information subsumed under each category are synthesized and simplified through the use of heuristic strategies and judgments regarding attributions of the cause of student behavior. Attributions ultimately lead to pedagogical decisions about the student. Constraints on decision making are also imposed by organizational factors related to the institutional structure of schools, and such institutional constraints exert pervasive influence on the process.

Shavelson's model was designed to explain classroom teachers' decision making and the model has been applied to investigations of

decision making in classroom teaching situations (Russo, 1978). But the notion of active decision making and factors included in the model easily apply to other educational decision making activities as well, including the decision to refer or not to refer a student for special education placement. In addition, the model has relevance to others involved in the chain of educational decision making, including school psychologists, speech-language specialists, and other assessment personnel engage in similar processes of information selection, organization, and synthesis. It is clear that factors such as child variables, clinician variables, task variables, and organizational variables play an important part and influence decision making in assessment as well as a variety of other educational activities. In the following paragraphs, work which has been carried out on decision making will be examined, in spite of the fact that only a small part of the research has involved minority and language minority students.

Prior Research in Educational Decision Making

As was pointed out earlier, in recent years the role of decision making has received a great deal of attention from researchers and practitioners in special education. In special education practice, there are a large number of key decision making points which may have an impact on a student's academic career. In those cases where a learning problem is suspected, a series of decisions must be made related to referral, screening, assessment, classification, identification, placement, instructional planning, pupil evaluation, and program evaluation. While educational diagnosis and assessment with any child is an imprecise activity (Ysseldyke, 1979), the additional ambiguity introduced into the assessment and decision making

process with language minority children may lead to bias, misdiagnosis, and misplacement. Given the concern with the long-term educational careers of language minority students, understanding of the process through which important educational decisions are made on their behalf is important.

One of the key features of the current legislative mandates is that in cases where a learning problem is suspected, decisions must be made by groups or teams of educators. P.L. 94-142 specifies that the case of any student referred for special education placement must be individually considered by a team of educators and diagnostic personnel at an IEP (individual education program) meeting. In terms of the group process, required steps imply a rational model of decision making and involve a typical problem-solving sequence which includes 1) defining the problem under consideration, 2) reviewing alternative courses of action available, 3) considering the consequences of various alternatives, and 4) selecting the alternative which will yield the best results. Under the legally-based assumption that the IEP team setting is the site where decision making occurs, a number of studies have been designed toe examine specifically and directly the group decision making at this level. Many of these studies have consisted of naturalistic observation of committee meetings (Goldstein, Strickland, Turnbull, & Curry, 1980; Mehan, Hertweck, & Meihls, 1983; Patton, 1976; Thouvenelle, Radar, Hebbeler, Brandis, Halliwell, Madar, & Hanley, 1980; Ysseldyke, Algozzine, & Thurlow, 1980). However, other methodologies have been employed, such as the use of mail survey techniques (Fenton, Yoshida, Maxwell, & Kaufman, 1977). For the most part, these studies have attempted to describe decision making at the

level of the group involved. In general, these and other studies have found that the patterns observed do not correspond to the four steps of the rational model. Rather, findings suggest that:

- Decision making is distributed across time and people
- IEP meetings are held to ratify decisions made prior to the meeting
- Decisions are often based on factors other than child characteristics
- IEP meetings are used to present previously made decisions to parents to secure consent

Given the above findings regarding decision making patterns, many investigators have interpreted educational decision making as ineffective and flawed. This is primarily due to comparing observed practices with the theoretical ideal embodied in rational models.

Taking a slightly different approach, Mehan et al. (1983) employed an ethnographic approach to study special education decision making within the context of he school social system. When the process of decision making was studied from the perspective of the participants, it was found that there were a number of "good organizational reasons" in the form of "everyday constraints" to explain how teams come to make decisions in the ways that they do. In essence, the study indicated that often, seemingly senseless or even inappropriate decisions were in fact logical responses to institutional constraints.

In addition to those studies which have attempted to examine group decision making, a number of studies have been conducted to investigate decision making by individual team members. For the most part, these studies have been designed to identify and explore factors which

influence group decisions. Such research includes Fenton, Yoshida, Maxwell, and Kaufman's (1979) investigation of team members' knowledge and understanding of team goals, Gilliam's (1979) and Knoff's (1983) studies of the perceived influence of various team members, and Yoshida, Fenton, Maxwell, and Kaufman's (1978) study of team member's participation in the satisfaction with the team meeting. Other studies have explored the types of information educators actually use in making decisions (Matuszek & Oakland, 1979) or information that team members believe influence their decisions (Ysseldyke, Algozzine, Regan, Potter, Richey, & Thurlow, 1980).

Overall, the results of these studies indicate that team members do not have a clear notion of team goals (Fenton et al., 1979), that disproportionate influence of members occurs in team meetings (Gilliam, 1979; Knoff, 1983), that degree of participation in a meeting is not necessarily related to satisfaction with the group process (Yoshida, et al., 1978), that team members believe that objective, child-based characteristics influence decisions (Ysseldyke, et al., 1980), and that most assessment personnel rely on informal and nonstandardized measures in evaluating children for placement (Matuszek & Oakland, 1979).

While prior research in special education decision making has not focused extensively on language minority children, some findings have bearing on that population particularly with respect to placement decisions. Mehan, Hertweck, and Meihls (1983) noted that some programs appear to operate in competition. In particular, special education and

bilingual education programs represented alternative choices for placing language minority students. Such a situation was also noted by Tymitz (1983) as a programmatic issue affecting the evaluation of bilingual special education programs.

Additionally, changes in special education placement data can be interpreted within a framework of constraints on placement decisions. In recent years, language minority children have been placed in special classes for the learning disabled more frequently than they have been placed in classes for other mildly handicapped children. Such a situation reflects a shift from placements in EMR to placements in LD classes and may represent institutional responses to proportionate representation mandates rather than efforts to appropriately place language minority students. It is clear that there is little empirical information regarding the practices and procedures which are used in special education and referral and placement when language and cultural differences are a part of the clinical picture.

Conclusions and Summary

From the legislation behind P.L. 94-142 there emerge several major themes and concepts which are particularly relevant to the special education of Hispanic handicapped students: nondiscriminatory ability testing; assessment decision-making by a multidisciplinary team; development of IEP's for students; and parental participation in educational planning (Omark & Erikson, 1983; Jones, 1976). In addition, this legislation represents a mandate to improve the professional training of those who serve or will serve the Hispanic handicapped. Issues such as these raise a series of fundamental research questions which need to be addressed. They are central to the

entire process of special education and carry a special urgency for Hispanic handicapped children because of the difficulties inherent in disentangling learning problems from unfamiliarity with a particular culture, language, etc. The range of issues highlighted outlines a beginning agenda for applied research in special education for Hispanic handicapped students.

For the multidisciplinary IEP team charged with making instructional and diagnostic judgements about a student, it has been suggested in the previous sections that decision-making is related to a myriad of factors, including individual member's experience, training, sensitivity to the cultural/linguistic background of the student, as well as a number of other factors including the everyday institutional constraints (such as budgetary incentives and restrictions) under which educators operate. Since decision making is a human activity, however, it is inevitable that bias will enter into the process. In spite of this, however, the seriousness of decision making with language minority children should require that the error which forms a part of the decision making activity is random error and not error which is systematically related to the linguistic and cultural background of minority students.

In sum, the study of minority children in special education (especially Hispanic children) is a new field with little empirical information available. Information about effective practices, as well as the most effective linkages between different components and steps in the decision making process, are needed in order to assist educational personnel to effectively instruct children with special needs. At a preliminary level, there is a need for basic descriptive

information about the types of language minority students currently being served, as well as the types of responses that school districts are making with respect to the assessment and instruction of these students. This is seen as a first step in linking current instructional and assessment practices with existing theory, as well as forming a basis for the development of testable hypotheses and future theoretical frameworks. Information about existing as well as potentially effective practices, as well as the linkages between developing practices and theory are needed in order to assist educational personnel to effectively instruct children with special linguistic and learning needs. This lack of empirical and theoretical information is especially critical given the increasingly large number of language minority students that many school districts are encountering. In an attempt to address this need, the present investigation examined the educational outcomes (referral, assessment, and placement) of a large number of Hispanic students, Kindergarten through high school, referred for any special education services during an entire academic year. The following sections provide a detailed description of the investigation and the major findings.

The remainder of this report is organized in the following fashion. First, the research questions and the a priori hypotheses are outlined. Next, a discussion of the sampling considerations, at both the school district and the individual student levels, which guided the conduct of the study is presented. Following this, basic descriptive information on both the participating school districts, as well as on the characteristics of the students in the sample, is outlined. In addition, initial predictive analyses with dependent variables of

interest are described. Finally, a discussion of the findings of the study, with attention to the previous work done in this area, and suggestions for next steps and future research, are presented.

II. Research Questions and Hypotheses

Although the present investigation was primarily descriptive and not experimental, there were specific research questions that guided the collection of the data. In addition, the review of related studies and research presented in the previous sections provided a basis for certain hypotheses regarding anticipated patterns in the data.

The primary research questions addressed in this study included the following:

1. What are the general background characteristics of Hispanic students referred for special education services in large urban school districts?
2. What are the pre-referral educational characteristics of these students?
3. What are the pre-referral instructional placements of these students (i.e., are most referred from regular education or from bilingual instructional settings)?
4. What are the primary reasons for referral for special education services?
5. To what extent is a given student's linguistic status taken into account in assessment procedures?
6. What are the most characteristic assessment procedures? With what type of assessment model do the assessment procedures appear to reflect (i.e., a medical model, or a social system model)? How much variance is there in assessment procedures? Does the assessment appear to "test to the referral" or does it appear to reflect a more open-ended, exploratory course?

7. How is the IEP team configured (i.e., who are the school personnel who attend the meetings)? How extensive is parental attendance at these meetings?
8. What are the major decisions made at the IEP meetings? What are the diagnostic categories most frequently assigned, and what are the accompanying instructional placements? For example, how many students are channeled into bilingual instructional placements, and how many are channeled into special education placements? Are the two mutually exclusive? To what degree are these students mainstreamed in the regular classroom? What are the major types of goals and objectives specified at IEP meetings? To what extent does the IEP team determine that a referral is inappropriate (i.e., how often are students referred but never placed)?
9. What are the most powerful predictors of diagnostic category and instructional placement?

Based upon the review of relevant research and clinical expertise and experience with handicapped minority students, a number of hypotheses were generated with respect to the above questions. The central hypotheses were as follows:

1. It was predicted that selected background and educational characteristics of the students in the sample would include indicators which would place them at high risk for special education referral. For example, these might include variables tapping family stability, amount of school missed, number of schools attended, number of siblings in special education, previous medical problems, etc. To the extent that

these indicators fail to predict to certain diagnostic or educational outcomes for this group of students, it was hypothesized that this could be taken as an indication of the schools' problems in differentiating learning problems from cultural and linguistic differences.

2. It was hypothesized that mildly handicapping conditions would constitute the most frequent diagnostic outcomes, and that the bulk of the referral reasons would cluster around academic problems and behavior problems.
3. It was hypothesized that due to the amount of legislative and judicial mandates focusing on language minority students, districts would take students' linguistic status into account during the assessement process.
4. It was hypothesized that school districts would conduct assessment is such a way that a medical model philosophy could be inferred. In addition, it was hypothesized that there would be little variance in assessment procedures. These predictions were based upon the fact that the medical model continues to dominate school practice in related studies. In addition, the "everyday constraints" under which school personnel operate would tend to facilitate the use of the least time consuming and least demanding approach.
5. Based upon past research on the decision making activity within IEP teams, it was predicted that the psychological perspective would be the most dominant, as reflected in the

educational record. In addition, it was predicted that parents would not be in frequent attendance at IEP meetings, especially where linguistic differences exist.

6. It was hypothesized that selected background factors of students as well as various school factors would account for a substantial portion of the variance in specified dependent variables such as diagnostic category and instructional placement. It was hypothesized that predictors would include variables such as language background, assessment procedures, family stability, etc.

III. Methods

In the present study, the primary interest was an examination of the referral, assessment, and placement of Hispanic handicapped students in special education in large urban school districts. The following sections, therefore, provide a description of the district-level and student-level selection procedures, as well as a description of the data collection procedures employed in the study.

District Selection Procedures

The primary rationale guiding the selection of school districts for the study was that an examination of large urban districts would be theoretically interesting given the scope of the classification and diagnostic challenges with which these districts are faced. This aspect of the selection process was based upon the hypothesis that districts with large numbers of Hispanics would have extended experience with the issue of differential diagnosis (i.e., differentiating unfamiliarity with the language and culture of public school classrooms from potential learning problems) and therefore might be expected to have developed different types of practices in dealing with these issues than districts with fewer numbers of Hispanic students.[1]

Three major criteria were used to select potential districts for the study. The first was based on the stipulation that the district have an enrollment of at least 10,000 students. This first criterion was included to insure that each district met a minimum size cutoff. The second criterion stipulated that the districts included in the study fall within the upper 50% of surrounding districts in terms of enrollment of Hispanic students in the general school population. The final criterion required that each district have at least 200 Hispanic

students in EMR and LD special education placements. This third criterion was included to insure that sufficient numbers of Hispanic special education students would be available for study.

1980 data from the U.S. Office of Civil Rights and California State Department of Education data (1982) were used to examine the relevant characteristics of school districts in a four county area surrounding the central research site in Southern California. There were 338 districts included in this data subset.[2] Districts were then selected from this list of 338 districts based upon the size criterion (more than 10,000 students total) and the ethnicity criterion (at or above the 50th percentile in terms of Hispanic enrollment). Finally, districts which had an enrollment of 200 Hispanic students in special education were selected from the list of remaining districts. Using the above three criteria, a total of fourteen districts were identified and were considered for inclusion in the final sample. Of the fourteen school districts contacted for participation in the study, four districts agreed to participate. (The most frequent reason for refusal to participate included the fact that this investigation was originally conceived as a five year longitudinal study, and several districts were reluctant to commit for such a long period of time.)

One of the four districts identified through the preceeding steps was a very large district and was divided into eight administrative regions. As data which will be presented in a later section demonstrate, the separate regions in this district were approximately equal in size to the remaining independent school districts. In addition, each of these administrative regions were relatively independent. For example, the following quote from a district

publication illustrates this point:

> . . . the district's administration is decentralized. . . . day to day educational matters are handled by eight administrative . . . offices, each with its own superintendent. Decentralization provides the opportunity for the region superintendent to have closer and more frequent contact with the local community, principals, faculty and advisory councils. A decentralized administration means programs can be developed that reflect the particular needs and desires of local communities.

Therefore, because of both the size and the relative administrative independence of each of the regions in this district, the five regional areas with the highest concentrations of minority (Hispanic) students were contacted individually for participation. All five regions which were contacted and agreed to participate and were included. These were subsequently treated as "districts" for the purposes of this study. In total, therefore, there were eight districts which participated in this investigation.

Student Selection Procedures

Ethnicity and language proficiency. The students involved in this study were located in the eight "districts" referred to in the previous section. All of the students whose files were examined as part of this investigation were of Hispanic background. Although initial consideration had been given to sampling the range of LEP students, examination of statewide data indicated that approximately 76% of the State of California's 400,000 limited-English-proficient (LEP) public school population is Spanish-speaking (Cegelka et al., 1984). Therefore, a decision was made to include only Hispanic students for the purposes of this study.

Although the terms Hispanic and LEP are often used interchangeably, it is recognized that these terms are not synonymous. As an example, there are many Hispanics who are not bilingual in the traditional sense of the term. It is also true, however, that "bilingual" represents a continuum rather than a discrete state. It was felt that limiting the sample only to LEP students would have the effect of screening out large numbers of students who have varying degrees of exposure to a second language and varying degrees of facility in one or more linguistic codes. It was therefore concluded that this limitation would limit the usefulness of the study to examine the range of student types currently faced by public school systems such as those represented in the study. For this reason, it was determined that the sample would include varying degrees of language proficiency (i.e., language proficiency would be defined in the broadest possible sense), and all Hispanic children meeting the additional criteria were included in the study.

Age and grade. In terms of age, it was decided that an age range covering all of the elementary and secondary school years would be included in the sample. It was recognized that the bulk of the sample would likely consist of children in the early elementary grades, primarily due to the fact that students tend to be labeled in the early primary grades in the mildly handicapped categories. However, having the entire range of kindergarten through high school available as a population pool was seen as desirable to study the special education referral process at all levels within the educational system.

Diagnostic categories. The initial sampling plan for this study was based upon a design allowing pre-specified selection of diagnostic

categories such that specific contrasts of interest could be outlined prior to data collection. However, it was determined that an a priori, artificial stratification of the sample, although experimentally useful, would unduly distort the real-life nature and structure of decision-making in the schools. That is, it was decided that an artificially determined delineation of the diagnostic categories of interest might skew or otherwise "wash out" aspects of the decision-making process that would limit the usefulness of the study to make generalizations about actual institutional activities.

Given the above considerations, the students comprising the final sample in the study included all those Hispanic students newly referred for special education consideration in each of the participating school districts during the 1983-1984 target school year. This was operationally defined to include all students referred after July 1, 1983 until the period of June, 1984. Further, this was defined to mean the period after the local review team had seen the child, if such an entity existed in a given school or district.

Although the sampling constraint adopted had the disadvantage of removing some of the experimental control, it was felt that it would reflect a more realistic and naturalistic picture of the types of students about whom schools such as those in the sample were required to make decisions.

Data Collection Instrument

The primary data source in this study was student school file records. In order to insure reliable and valid data collection, a series of steps were carried out with respect to the creation of the data collection instrument. The initial draft of the instrument was

formulated through preliminary review of related literature to identify key decision-making points and types of data used by schools in decision-making. In addition, existing legislation was reviewed in order to include items of importance from a legal perspective, for example specified time limitations between referral and assessment, etc.

Once this preliminary step was accomplished, feedback from school psychologists, teachers, and administrators in the districts where the study would be carried out was solicited for comment on the first draft of the instrument, specifically with respect to the appropriateness, availability, and importance of the information to be collected. Once the comments of the school consultants were incorporated, pilot testing of the instrument was carried out. School files of potential subjects were examined through the use of the data collection instrument in three of the school districts participating in the study. Based upon the results of the pilot testing, the instrument was further refined. The major subsections of the final draft of the data collection instrument included family characteristics, student characteristics, teacher evaluations, academic achievement, bilingual language information, referral, assessment, and IEP information. A copy of the data collection instrument is found in Appendix A.

Data Collection Procedures

All data was collected by 11 research associates who were affiliated with the Institute. All were graduate level students with majors in special education and/or psychology. In addition, there were eleven part-time bachelor's level research assistants who worked under the supervision of the research associates and the project staff.

Training procedures. Once the data collection instrument had been finalized, training for all data collection personnel was conducted for a two day period. Training focused on the review of psychological and educational folders of the students in the study, as well as more general information such as types of scores which might be encountered and the names and types of common educational and psychological tests. In addition, training encompassed on the interpretation and recording of quantitative and qualitative data, locating specific sources of information, local school procedures, data management procedures, confidentiality, etc. The bulk of the training, however, consisted of a simulated data collection excercise using an actual case from one of the districts in the study. All data collectors attempted to code the information in this same case, and data collection booklets were then checked for reliability. Discrepancies were then resolved, and conventions regarding the data collection booklet were established. Weekly and bi-weekly meetings were devoted to ongoing discussions regarding the reliability of data collection, emerging questions, special cases, etc.

Data collection. Initial data collection began in August of 1984, and continued until June of 1985. After permission had been granted to collect data in a given district, Institute staff attempted to identify a contact person who would be available to assist in data collection efforts, answer questions, provide access to data collection personnel where appropriate, etc.

Initial contacts with school personnel in each district focused on attempting to identify all students who met the criteria outlined earlier. In several sites, information on special education status and

ethnicity were located in separate files and had to be cross checked. In addition, psychological assessment and school based information were located in separate sites in several of the districts, necessitating a two-step data collection process for each student. For example, grades, achievement test scores, and some referral information were located at the individual school, while psychological assessement information was located in centralized district files.

Once ethnicity had been established for each student in a given district based upon school records, this was double checked at local school sites with persons familiar with the family such as the teacher or school secretary. In this way, Anglo students with Hispanic surnames who had been misidentified in school records were eliminated from the study.

All data was coded in such a way such that confidentiality of school districts, individual schools, and individual students was maintained. Once a data collection booklet had been completed for each student, it was brought back to the central research site for later coding. Using the above procedures, data for 1319 students was collected.

Data Analysis

Data coding. Coding of the data collection booklets was ongoing throughout the data collection period. During the initial coding efforts, an attempt was made to identify those variables for which little or no data was available, such as the ethnicity of the school psychologist conducting the assessment. Those variables which had 60 percent or greater missing data were not coded for the present analyses due to time constraints. In addition, data booklets were continously

examined in order to generate a finite list of categories for some of the open-ended variables, for example types of tests used in assessment, reason for referral, etc. Once these steps were completed, a data coding booklet was created for use in coding the student file data collection protocols.

Because an important part of the data analysis was based upon predictive analyses of combinations of variables, a large part of the coding consisted of creating dummy variables which could be used in these later analyses. The use of dummy coding offers the advantage of creating interval level data, which are required for the more powerful statistical methods, from categorical level responses.

The final number of variables which were coded totaled 359. A copy of the coding booklet (which also serves as a coding manual) with the variable names used in the analysis, is contained in Appendix B.

Data input and preparation. All data was input through through the use of a computer terminal with a full screen editing system (VT 100 with operating with the ED2 editor) by an experienced data entry technician. All data files were verified for accuracy. The data files were set up as SAS (Statistical Analysis System) system files. Files were then transferred through a telecommunications program to a nearby university where further editing and analyses were conducted with the mainframe computer system.

Data reduction. The initial step in the data reduction process was based upon an initial frequency run on the variables which had been coded. At this point, those variables for which more than 60% missing data was recorded were dropped from further analysis. The resulting list of variables comprised the data set used for the descriptive portion of the data analysis.

In addition to the above, some of the variables that demonstrated high intercorrelations and that appeared to be measuring a common factor were combined to form scales which could be used for later predictive analyses. For example, the high intercorrelations of the 4 items of the Home Language Survey suggested that the items could be combined to create a new language variable and thereby form a more global measure tapping language background. Once these data reduction steps had been taken, approximately 95 variables remained for further analysis.

Although the total sample for whom data was collected was 1319 students, 165 of these were secondary level students. Since the bulk of referral, assessment and placement activities for special education students takes place in the early elementary years, it was decided to examine only elementary level students for the purposes of this report. This decision was further supported by the observation that senior high schools tend to operate under separate administrative structures than elementary level schools. Since the senior high group (N = 165) was assumed to be qualitatively different from the elementary level group, the seniors were omitted from the following analyses. Therefore, the total sample size for which results are presented in the following section is 1154. In those instances where the sample size was reduced because of missing data, the actual size is indicated in parentheses.

Footnotes

[1]This aspect of the design was not reflective of the research team's belief that similar problems do not confront rural school districts. For example, the education of migrant students, most often located in small, rural school settings, present parallel and equally complex problems. Rather, the decision to exclude rural districts was based upon limitations of available resources).

[2]There were several problematic aspects regarding the use of the OCR data base for this part of the investigation. For example, the research team was aware that the OCR data has been criticized on the basis of validity due to the self-report nature of the data. Additionally, it was discovered that OCR data do not exactly match the State of California reporting categories. For this reason, for instance, data on the "language impaired" was not included in the OCR data. Finally, the OCR data base does not include all districts, but rather is based upon a sample of districts. In spite of these problems, this was the only comprehensive data base which contained the district-level data required to select the districts to be included in this investigation. As an example, the State Department of Education data reports ethnicity by special education placement, but the intersection of ethnicity, handicap, and placement is not reported by district).

IV: Results

The results of the analyses which were conducted for this study are divided into two sections. The first section provides the descriptive data on the sample in the study. This descriptive data is presented in logically and conceptually grouped domains for consistency and easy of interpretation. The domains include background characteristics, educational characteristics, language variables, referral-related variables, assessment, IEP meeting, and IEP educational outcomes.

The second part of the results section presents the results of a predictive analysis examining factors leading to the most frequent diagnostic categories. Each section will be described in turn.

Descriptive Analyses

Since data was not available for all subjects on all variables, the number of subjects and percentage of the total sample on which a given figure was based is presented in parentheses.

Background characteristics. As might have been expected, the bulk of the students in the present sample were male (N = 743, or 64%). In addition, the majority of the students were young (mean age = 8.6 yrs., s.d. = 2.8 yrs.). Table IV(1) presents the breakdown of the sample by place of birth. Interestingly, a little over two-thirds of the sample was born in the United States, while about a quarter of the students were born in Mexico. Although a great deal of data was found to be missing on this variable for parents. Table IV(2) presents a similar breakdown by parent. Although much data is missing, the available data suggest that both parents tend to be born in Mexico, in contrast to the students themselves.

Table IV(1)

Percentage: Number and percent of Sample X Place of Birth

Birthplace	Number	%
USA	725	69
Mexico	265	25
Puerto Rico	3	.29
Cuba	2	.19
Other	53	5
Total	1048*	

*Data missing for 106 subjects (9%).

Table IV(2)

Number and Percent of Student' Parent by Place of Birth

	Mother		Father	
Birthplace	Number	%	Number	%
USA	107	20	99	20
Mexico	372	71	355	71
Puerto Rico	3	.6	5	1
Cuba	1	.2	39	8
Other	44	8	1	.2
Total	527	*		499**

*Data missing for 627 subjects (54%).

**Data missing for 655 subjects (57%).

One series of variables which were collected for this sample can be considered as indicators of "family stability." The first of these indicators was whether or not there was a legal guardian for the child other than the parent. Fifty four, or 5% of the students were found to have such a legal guardian. The remaining indicators of family stability examined whether the parents and child were living at home. Only 18 or .02 % of the students were not living at home. In contrast, 248 or 21% of the fathers were not living at home, but only 57 or .05% of the mothers were not living at home.

In general, the students in the sample did not come from exceedingly large families, although the range of the number of siblings was from one to fifteen. The mean number of siblings, however, was 3.07, s.d. = 3.0 (N = 1015, or 88%). About 11% of the students in the sample had siblings who were currently in special education placements (N = 503, or 44%).

The largest portion of the students were born in the United States, as indicated earlier. Of those not born in the U.S., the age of arrival ranged from one to fourteen years. The mean, however, was 1.16, s.d. = 2.8.

One aspect of pre-referral background characteristics that was left to be important to examine was evidence of previous childhood medical trauma which might influence academic progress. The following table (Table IV(3)) presents the percent and numbers of students who had a history of selected medical-related problems.

In general, the data in this table suggests that for the majority of students, organic or medical conditions were not primary factors in later special education referral.

Table IV(3)

Number and Percent of Sample with a History of Selected Medical Problems

Type of Condition	Number	%
Serious hearing problem	76	7*
Serious vision problem	112	10
Serious chronic condition	63	5
Head injury	17	1
Chronic or lengthy hospitalization	42	4
Other serious conditions	169	15

*Percentages were based on N = 1154. It was possible for students to have more than one condition, so that categories were not mutually exclusive.

Educational characteristics. In general, the majority of students in the sample were found to be in the earlier grades (mean grade = 1.16, s.d. = 2.8). In addition, the vast majority had enrolled in U.S. public schools at a very early age (mean = 5.3 yrs., s.d. = 1.23). The current placements/instructional services received are presented in the following table (Table IV(4)).

As Table IV(4) indicates, the vast majority (about three quarters of the sample) are in regular classroom settings. However, school districts appear to work extensive use of resource specialist services. In addition, sizable numbers of students were receiving language/speech services, and an equally high number were placed in special day classes (self-contained settings).

Table IV(4)

Current Instructional Placements/Instructional Services

Type of Placement/Services	Number	%
Regular classroom	886	77*
Resource specialist program	507	44
Learning disabled placement/service	55	5
Designated instruction services	107	9
Language/speech services	223	19
Special day class at regular school	214	19
Special day class at special site	20	2
Home teaching	4	1

*Percentages were based on N = 1154. Placement/services received were not mutually exclusive such that students could be in more than one category.

One of the interesting variables related to educational background was the number of days of school missed for the year of referral, the pre-referral year, and two years prior to referral. The data is presented in Table (V(5).

Table IV(5)

Mean, Standard Deviation and Range of School Days Missed by Academic Year

Academic Year	School Days Missed		
	Mean	S.D.	Range
Year of referral (83-84)	7.5*	7.15	0 - 59
Year prior to referral (82-83)	8.13**	7.88	0 - 68
Two years prior to referral (81-82)	8.69***	8.21	0 - 70

*Data available for N = 835 (72%).

**Data available for N = 783 (68%).

***Data available for N = 653 (57%).

Although the range of values for each of the years is rather large, the mean values are naturally smaller. Nevertheless, it does appear that the values represent a moderate to high amount of absenteeism.

Although all of the students in the sample were first time referrals, many students were receiving special services prior to referral. Table IV(6) provides data on the most common types of services received in the years prior to referral.

Table IV(6)

Number and Percent of Students Enrolled in Previous Instructional Programs or Services

Type of Service	Number	%
Resource specialist	164	14
Learning disabled	5	.4
Designated instructional services	59	5
Language and speech services	164	14
Special day class, regular site	22	2
Special day class, special site	2	.2
Bilingual education program	260	23
ESL	264	23
Home teaching	8	.7
Remedial math	48	4
Remedial reading	232	20

It should be noted that with respect to the data in the table that some of the services/placements specified require referral and IEP, yet all of the sample was supposedly composed of first time referrals. This discrepancy is explained by the fact that students who had been in special education in a different district, but who were assessed and provided a new IEP in the current district, were included in the sample. That is to say, if the student's case was treated as a new referral by the district in our study, the case was included.

As the data indicate about a quarter of the sample had been in bilingual education or ESL prior to referral. In addition, remedial reading appears to have been a common pre-referral intervention, while use of the resource specialist and language/speech services were the next most frequently used services. These data suggested that many of the students were experiencing academic difficulties prior to the actual referral.

A second indicator of the degree of pre-referral referral difficulty is provided by data on retentions and accelerations. While only fourteen students (.1%) had experienced some form of acceleration during their school careers, 524 (45%) had experienced some type of retention.

A third indication of pre-referral difficulty is evidenced by student grades during the pre-referral year. Although there was a substantial amount of missing data on these variables, nevertheless these data are included because of their relevance to the questions examined in this study. Table IV(7) provides the distribution of student grades for those subjects where data was available.

As the data in the table indicate, the grades appear to have clustered in the C-D range, suggesting along with the other indicators that students were experiencing notable academic difficulties prior to referral for special education.

Table IV(7)

Distribution of Student Grades X Subject During Pre-Referral Academic Year

	Subject				
Grade Distribution	Language (N = 507, or 44%)*	Reading (N = 479, or 42%)	Math (N = 608, or 53%)	Science (N = 526, or 46%)	Work Habits (N = 521, or 45%)
0***	2**	7	6	2	7
1	19	48	36	14	16
2	66	38	48	76	65
3	10	6	8	8	5
4	3	2	3	.8	7

*Percentages are based on total sample size of 1154.

**All figures are percentages based upon the numbers of students in each subject for whom grades were available, indicated beneath each subject area.

***All grades were converted to a five point scale, where A = 4, F = 0

Language use variables. Since the issues of bilingualism was central to the questions addressed in this study, there were several variables which were related to language usage and proficiency. Taken together, these provide a characterization of the language background of the sample.

Although this sample was selected on ethnicity and not limited-English proficiency, it was hypothesized that a very large

portion of the sample would have some exposure to Spanish. Indeed the data support this hypotheses, as indicated in Table IV(8).

Table IV(8)

Numbers and Percentages of Students X Home Language Background

Type of Exposure	Number	%
Spanish only	164	15
English and Spanish	919	85
English only	2	.2

Note: Data was available for 1085 or 84% of the sample.

Further data on home language background was available from the Home Language Survey. A screening device used by schools to help determine language dominance. Table IV(9) provides a breakdown for each of the items on the Survey.

Again, the data suggest that the overwhelming majority of students have some exposure of Spanish, but that most of the exposure is in bilingual, rather than Spanish only settings. In contrast, few of the subjects come from English only environments. This non-English exposure, of course, is directly tied to the school-based judgements about language dominance and proficiency. The child's primary language, for example, as determined by school personnel, is presented in the following Table IV(10).

Table IV(9)

Percent of Sample X Dominant Language on Items of the Home Language Survey

Language	Language Learned First (N =764, 66%)*	Language Child Uses at Home (N = 764, 66%)*	Language Parents Use w/Child (N = 763, 66%)*	Language Adults Use w/Each Other (N = 755, 65%)*
Spanish Only	30**	32	28	25
Both	63	57	61	59
English Only	7	11	11	16

*Percentage based on total sample size of 1154.

**Percentages based on sample size for which data was available, indicated under each language use domain.

Table IV(10)

Number and Percent of Students X Primary Language

Language	Number	%*
Spanish	342	30
Spanish and English	485	42
English	185	16

*Percentages are based on total sample size of 1154.

In addition to the determination of language dominance, schools are required to assess language proficiency. As part of this

determination, students are assigned to language proficiency categories for various administrative and educational purposes. The breakdown for the sample by the different categories is presented in Table IV(11).

Table IV(11)

Numbers and Percent of Students X Language Proficiency Category

Category	Number	%*
NES/NEP (Non-English Speaking/ Proficient)	145	13
LES/LEP (Limited-English Speaking/Proficient)	236	21
FES (Functional English Speaking)	116	10
FES/FEP/PES (Fluent/ Proficient English Speaking/Proficient	344	30

*Percentages are based on total sample size of 1154.

Interestingly, although the previously presented data suggest that relatively few of the students are from English-only backgrounds or have English as a dominant language, about a third (30%) of the sample has acquired sufficient proficiency to be considered fluent or proficient by the schools.

The final pieces of information with respect to bilingual issues is reflected in data available on students' participation in bilingual or ESL programs. Although Table IV(6) earlier provides information on

students who had been enrolled in bilingual or ESL programs in the years prior to referral, this data reflects participation in these programs in the years in which the child was referred. The available data indicates that 417 (36%) of the sample was participating in a bilingual program during this period, while 374 (32%) were participating in ESL programs.

Referral. A key step in the progress of educational activities eventually leading to a special education lable and/or placement is referral. The primary source of data regarding the referral was the specific reason for referral available in student folders. In many cases, referrals were made by teachers through checklists provided by the schools which list specific tapes of problems, and therefore, extensive, recorded, narrative information was not available. In spite of this limitation, the data do permit a descriptive picture of the types of problems for which students in the sample were referred. This data is presented in Table IV(12).

Clearly, academic reasons are important in the referral process. The most frequent categories are low achievement and reading difficulty, followed by math problems and poor memory/retention. Interestingly, 22% of the students were referred for poor oral skills.

In general, most students were referred for more than one reason. Although 232 students (24% of those for whom data was available) were referred for only one reason. The mean number of reasons was greater than one (mean = 3.0, s.d. = 2.20).

Table IV(12)

Number and Percent of Students X Reason for Referral

Reason for Referral	Number	%*
Low academic achievement	434	45
Reading difficulty	411	43
Math difficulty	223	23
Spelling difficulty	156	16
Poor comprehension skills	124	13
Poor oral skills	210	22
Behavior problems	110	11
Failure to complete tasks	107	11
Poor memory and retention	211	22
Failure to follow directions	66	7

*Total sample size for whom data was available was 967, or 84%, and percentages are based on this figure. Also, since the same student could have more than one reason for referrals the percentages add to more than 100%.

Although the point of referral was the entry point for data collection purposes, some school districts employed "child study terms" prior to channeling students into the formal referral track. These informal, local school-based terms attempt to intervene and assess students with the intent of avoiding further formal intervention. Due to the informal nature of these terms, they are not subject to the normal level assessment and IEP terms. The available school file data

revealed that 641 students (56% of the sample) had been seen by a child study team prior to a formal referral for special education referral.

In addition to those students in the sample chose cases were eventually considered by an IEP team, there was a sample number of students who were formally referred for special education but who never had an IEP. Although the specific reasons for this "break" in the formal process are unknown, 90 students (7.8% of the sample) fell into this category.

Assessment. Although home-based information was commonly cited by school specialists as being an important part of assessemnt, during informal contact at various district sites, the data available indicated that this rarely included home visits. Only 15 (.01%) of the students had a home visit as part of the assessment process between the point of referral and the IEP. Of course, this small number only reflects actual home visits, and does not preclude gathering of home-based information by other means, e.g., telephone interviews. In fact, informal assessment, in addition to formal standardized testing, was reported for 540 students (47% of the sample).

Another commonly cited factor of importance with respect to language minority students is the issue of language of assessment. For the sample of students in this study, 629 (55%) were assessed only in English, while 260 (23%) were tested using a combination of English and Spanish. Interestingly, only 69 students (.06%) were tested entirely in Spanish as part of the special education referral process.

The most frequently administered psychological instrument administered as part of the assessment process was the WISC-R. This was given to 728 students (63% of the sample). The most common

achievement test administered was the WRAT (Wide Range Achievement Test), given to 727 students (63% of the sample). Although full scale or total scores were unavailable for many students, because of partial or incomplete test administration, the available data on the WISC-R and WRAT is presented in Table IV(13).

Table IV(13)

Summary Performance Data on the WISC-R and Wide Range Achievement Test (WRAT)

Index	WISC-R Verbal	WISC-R Performance	WIRC-R Full Scale	WRAT Reading	WRAT Math	WRAT Spelling
Mean	81.29	94.5	87.37	22.08	10.24	17.47
s.d.	14.04	14.0	15.32	16.28	14.86	16.24
# of subjects for whom data was available	643	707	629	631	552	652
% of total sample	56	61	55	55	48	57

In addition to the specific scores available on the WISC-R and WRAT, data was available on the types of psychoeducational tests most commonly administered to the students in the sample. Unfortunately, scores were not available for such a large number of students because of partial test administration that the data were coded only to indicate if a given test was administered or not. Data on the administration of the most frequently used tests is presented in Table IV(14).

Table IV(14)

Number of Percent of Students Reciving Specific Psychoeducational Assessment

Test Name	Number	%*
Berry	144	13
Bender	426	37
Brigance	199	17
Detroit	120	10
Draw a Person	370	32
Leiter	417	36
PIAT	554	48
PPVT	241	21
Vineland	64	6
Woodcock	140	12

*Percentages are calculated based on total sample size of N = 1154.

The four most common tests administered were the PIAT (almost 50%), the Bender, the Leiter, and the Draw-A-Person test. Given the fact that these last three tests involved limited or no linguistic demands on the part of the examinee, it is likely that they represent an attempt to accommodate the linguistic characteristics of the students assessed.

IEP team meeting composition. According to P.L. 94-142 and other local education codes, the IEP is the key decision making point in the referral process. The intent of this activity is to provide a

multidisciplinary perspective on the decision making process, including the input of parents. Interestingly, only 687 or 65% of the parents of those students in the sample who had an IEP (N = 1064) were present at the time the IEP was developed. Table IV(15) provides information on the number of other participants in the IEP meeting by role. The most frequent participates in the IEP meeting included the psychologists, special education teachers, and regular classroom teacher. Interestingly, the speech specialist was present at over a third of the IEP meetings, but the bilingual specialists almost never attended. Translators were infrequently used, only about 12% of the time.

Table IV(15)

Number and Percentage of Participants in IEP Meeting X Role

Role	Number	%*
Child advocate	16	1.5
Regular classroom teacher	128	59
Special education teacher	668	63
Psychologist	785	74
Speech specialist	390	37
Bilingual classroom teacher	7	0.7
Child	33	3
Translator	128	12

*Percentages based on total number of students in the sample minus those who did not receive an IEP (N = 1154-9 = 1064).

In order to examine the pattern of the relationship between the members of the IEP team, an intercorrelation of the members was conducted. Table IV(16) presents the intercorrelation matrix.

Table IV(16)

Intercorrelation Matrix of Participants at the IEP Team Meeting

	Parent	Reg. class teacher	Spec. Ed. teacher	Psych.
Regular class teacher	-.02			
Special Ed. teacher	.03	-.25**		
Psychologist	-.01	.20**	.11**	
Speech/lang. specialist	.07*	.03	.04	.05

* $p < .01$

** $p < .001$

As the intercorrelation matrix demonstrates, the special ed. teacher and the regular classroom teacher tend not to appear together at the IEP meeting. Although the psychologist's presence is associated with both the regular class and special class teacher, i.e., he may be present when either of these is present, he is somewhat more likely to appear with the regular class teacher. In general, then, there appears to be two major constellations for the IEP team composition. One is dominated by the presence of the psychologist and regular class teacher, the other by the psychologist and the special education teacher. Finally there is a small but significant relationship between the parent's presence and the presence of the speech/language specialist.

IEP educational outcome. One of the central tasks of the IEP team is to determine a given student's eligibility for special education and the appropriate diagnostic category if necessary. Table IV(17) presents the numbers and percentages of students classified by diagnostic category in the sample.

Clearly, the majority of students fall into two categories, either Learning Disabled or Language Impaired. Together, these two categories account for over 80% of the categories assigned at the IEP meeting. Interestingly, of the 1064 students (92% of the entire sample) who received IEP's, 66 (6% of the entire sample) were judged not eligible for any diagnostic category. When the number of students who did not receive an IEP (N = 90) are combined with the number of students who did not receive a diagnostic category (N = 66), it appears that 156 students who were initially referred for special education consideration "dropped out" at some point prior to final classification. This represents approximately 14% of the initially referred sample.

One of the additional tasks of the IEP team is to decide on appropriate instructional placements, and to develop appropriate educational goals for eligible students. Table IV(17) presents data on the number and percent of students who were assigned to various instructional placements.

Table IV(17)

Diagnostic Category	Number	%*
Aphasia	41	4
Autistic	0	0
Behavior disorder	0	0
Blind	1	.1
Deaf	1	.1
Deaf/Blind	0	0
Developmentally handicapped	3	.3
Educable mentally retarded	20	2
Hard of hearing	10	1
Language impaired	197	20
Learning disabled	630	63
Multiple handicaps	4	.4
Other health impaired	34	3
Orthopedically handicapped	8	.8
Partially sighted	2	.8
Emotionally disturbed	19	2
Trainable mentally retarded	6	.6
Other exceptionality	22	2

*Percentages are based upon the total number of students who had IEP's and eventually were placed into a diagnostic category, N = 998.

Table IV(18)

Number and Percent of Students by Instructional Placement

Instructional Setting	Number	%
Self contained class	231	22
Resource room	514	48
Regular class	387	36
Special education school	15	1
Other setting	25	2

*Percentages are based upon the total number of students for whom an IEP was held, N = 1064.

Although a little over a third of the sample was placed in a regular classroom setting, it appears that the use of the resource room setting was a heavily used educational alternative. Although very few students are placed in the most restrictive setting, a special education school, about a fifth of the sample was placed in a self-contained, special day class setting. In addition to the actual placements, it was found that 252 students (24% of the students receiving an IEP) were recommended for speech/language services as a result of the IEP deliberations. Finally, the mean number of academic goals specified by the IEP team was 2.13, s.d. = .93.

Predictive Analyses

As the descriptive section of the results indicates, the two most frequent diagnostic categories were learning disabled and language impaired. Together, these accounted for approximately 80% of the

students referred. Therefore, the focus of the predictive analysis was on the specific question "What are the student characteristics and the characteristics of the referral process which predict which students will be categorized as learning disabled as compared to those categorized as language impaired?" The primary approach used to answer this question in the present analysis was path modeling. This causal modeling technique is based on multiple correlational analysis and the use of standardized beta weights as path coefficients.

Data Reduction

After the data were edited and minor corrections were made in the inputting format, frequency distributions were run to determine the amount of missing data for each variable. Variables with more than 25 percent missing data were eliminated from this part of the analysis. Approximately 95 variables were identified as having sufficient data for the analysis. At this point correlations were calculated on this subset of variables. All variables with less than a .20 correlation were not included in the path model. The remaining variables were conceptually and logically grouped to create several scales and dummy variables, resulting in further data reduction.

As a preliminary step, a series of correlational and factor analyses were conducted. The scale construction was based upon the results of these analyses.

IEP team member variables. A principal axis factor analysis with a varimax rotation was conducted on the variables representing the presence or absence of the various IEP team members. The results of this analysis indicated that the central person involved seemed to be the special education teacher. When this individual was present, the

regular classroom teacher was not. The presence of the other members of the team did not appear to form any type of identifiable constellation. In a pilot study of a single school district, however, the central IEP team member was the speech pathologist. Therefore, it was felt that perhaps this pattern varied from district to district, and that any distinct patterns were being masked by analyzing the entire sample at once. Consequently, two IEP team member variables were included in the analysis. These are the presence or absence of the special education teacher and the presence or absence of the speech pathologist.

Home stability. This scale was created by a summation of the two variables indicating the presence of the student's mother in the home and the presence of the student's father in the home. Because these were dummy variables (0, 1) the scale ranged from 0 indicating neither parent was at home to 2, indicating the presence of both parents in the home.

Bilingual/ESL education. This scale represents the combination of the two variables indicating whether or not the students have been involved in any type of bilingual education or ESL instruction. Again, these variables were dummy coded and therefore resulted in a scale ranging from 0, indicating no participating in special language services, to 2, meaning that the student as been involved in both types in the past.

Number of tests given. These variables were divided into three sections: (a) the number of speech tests given, (b) the number of psychological tests given, and (c) the number of achievement given. These variables simply represented the summation of tests given within each category.

Reasons for referral. A principal axis factor analysis with a varimax rotation was conducted to determine the factor structure underlying this group of variables. Two factors emerged. The first consisted of those variables representing referrals for academic reasons, and the second representing referrals for oral comprehension and communication problems. Two dummy variables were created indicating whether or not the student had been referred for either of these types of reasons.

School language classification. The scale used for this variable was the one utilized by the school district. The scale ranged from 0 to 3, with 0 representing no proficiency in English and 3 indicating fluent English proficiency.

Final variables in the path model. The final subset of variables to be used in the path model were: birth year, home language, U.S. born, school language classification, academic referral reasons, referral for oral comprehension/communication, prior bilingual education/ESL, number of achievement test administered, number of psychological tests administered, number of speech tests administered, special education teacher at IEP, speech pathologists at IEP, number of psychological tests given in Spanish and diagnostic category.

Description of the path model. The exogenous variables in the model are birth year, home language, and U.S. born. The assumption is that these variables are not influenced by the other variables in the model, and are therefore considered the independent variables in the model. There is a slight intercorrelation between these exogenous

variables as can be seen in Figure IV-1. The causes of these exogenous variables are unknown or not of interest in the present model. The remaining variables in the model are assumed to be influenced by the the three exogenous variables in the model, and are therefore termed endogenous variables. These variables can be considered the dependent variables.

School language classification is the most recent rating given to the student by the school in English language proficiency. The assumption in the model is that language classification is influenced by the three exogenous variables and not vice versa, and is therefore treated as an endogenous variable.

Prior bilingual Education/ESL is also treated as an endogenous variable. It is assumed that prior participation in this type of program is influenced by all of the four earlier variables but that the reverse is not true.

The component of the model related to referral is included in two variables, referral for academic reasons, or referral for oral comprehension/communication problems. These variables were not combined into a single indicator due to the fact that they were not mutually exclusive, i.e., a student in the sample could have been referred for more than one reason. The assumption in the model is that reason for referral is influenced by the earlier variables in the model, but not vice versa.

INSERT FIGURE IV-1

The assessment component of the model was represented by four variables. These included three variables related to the type of test administered, and one variable related to the language of the tests given. Achievement Tests Administered was a simple dichomotous variable which indicated whether achievement testing was done as part of the assessement process. Number of Psychological Tests Administered was a simple count of the number of psychological tests administered as part of the assessment, and Number of Speech Tests Administered was a count of the number of speech/language tests administered. Finally, Language of Testing was a measure of the degree to which a language other than English was used in the assessment of the student referred. As before, the assumption of the model is that these variables are influenced by the prior variables in the model, but not the reverse.

The final variables in the model were concerned with the composition of the IEP team. The Special Education Teacher at the IEP and the Speech Clinician at the IEP were indicators of the participation of key personnel for the determination of the final diagnostic category. These two variables were assumed to be influenced by all other variables previously specified in the model, but not vice versa.

Having outlined the tentative model with indicators of the key steps and factors assumed to have an influence on diagnostic category, the model was tested by calculating all the possible direct and indirect path coefficients in the model specified. Figure IV-1 presents those paths which were determined to be significant, allowing

a determination of important direct and indirect effects on the dependent variable of diagnostic category (1 = Learning Disabled, 0 = Language Impaired).

Findings for the path model. The thirteen predictor variables in the path model produce an R^2 of .39, indicating that the thirteen variables together account for approximately 40% of the variance in diagnostic category. Eight of these variables have a direct effect on placement category after the effect of all the other variables in the model has been controlled. These are (a) prescence or abscence of speech clinician at the IEP (β = .16), (b) number of speech tests administered (β = .18), (c) school language classification (β = -.11), (d) number of psychological tests administered (β = .18), (e) referral for oral comprehension/communication problems (β = -.20), (f) prescence or abscence of special education teacher at the IEP (β = .12), (g) number of achievement tests administered (β = .11), and (h) student's birth year (β = -.10). In each case, a positive beta weight is associated with a learning disability diagnosis, and a negative weight is associated with a language impaired diagnosis. Since these variables are measured in different units and the main interest is in assessing the overall effect of one variable over another variable in the model, standardized path coefficients are reported here. These coefficients can be interpreted as the expected change in the dependent variable given a unit change in the independent variable, thus providing information on both the direction and strength of the relationship between the variables.

As Figure IV-1 indicates, a diagnosis of language impaired is directly associated with the speech pathologist being present at the

IEP meeting, a greater number of speech tests administered, a referral for oral comprehension/communication problems, a younger age, and greater fluency in English. In contrast, a diagnosis of learning disabled is directly associated with a greater number of achievement tests being administered, the prescence of a special education teacher at the IEP meeting, being older, a greater number of psychological tests being administered, and decreased fluency in English.

In addition to the direct effects, there are other variables which influence the diagnostic decision indirectly through mediating variables. Each variables will be discussed from left to right in Figure IV-1.

Birth year. In addition to its direct effect, birth year has an indirect effect on diagnostic category through referral for oral comprehension problems (= .23). That is, younger students are more likely to be referred for oral comprehension/communication problems, and in turn are more likely to be diagnosed as language impaired. In contrast, birth year is directly but negatively related to both the administration of achievement tests (= -.23) and the number of psychological tests administered (= -.10). Older students are more likely to be administered achievement tests and more likely to have a greater number of psychological tests administered. In both instances, this is directly related to a diagnosis of learning disability. In addition, birth year is negatively related to academic referral (= -.13) such that older students are more likely to be referred for academic reasons. This leads to an LD diagnosis, then, through the relationship to the administration of achievement tests and the number of psychological tests administered.

In addition to the above paths, birth year has an indirect path to diagnostic category through school language classification (β = .12) and the number of speech tests administered (β = .11). In the case of school language classification, younger students are more likely to be fluent English proficient, which in turn associates a language impaired diagnosis. In the case of the number of speech tests administered, older students are more likely to have a greater number of speech tests, which is directly related to a language impaired diagnosis.

Home language. Although home language does not have a direct effect on diagnostic category, it has an indirect effect through school language classification (β = -.13). As expected, a home language of Spanish is related to a classification as non-English proficient, which tends to be associated with a learning disability diagnosis.

U.S. born. The variable U.S. born (being born in the United States) does not have any direct influence on the dependent variable. However, it is directly related to two variables which do, namely school language classification (β = .25) and the number of psychological tests administered (β = .12). In the first case, being born in the U.S. is related to a classification as a fluent English proficient student in turn related to an LD designation. In addition, being born in the U.S. is related to a greater number of tests being administered, which is then related to the LD diagnosis.

The variable is related to two language-based variables, prior bilingual education/ESL (β = -.10) and the language of testing (β = -.10). Being born in the U.S. is associated with prior bilingual education, in turn related to a greater number of speech tests

administered, and then a language impaired diagnosis. Also, being born in the U.S. is associated being assessed in English, which in turn is related to having a speech person at the IEP, and a diagnosis of language impaired.

School language classification. Although language classification has a direct effect on diagnostic category it also influences this variable indirectly through three other variables. These include a referral for oral comprehension/communication problems (β = -.06), language of assessment (β = -.34), and prior bilingual education (β = -.16).

Language classification, as the beta weight indicates, is negatively related to referral for oral problems. This means, given the direction in which the variables were coded, that a nonproficient English classification given by the school was related to having an oral referral, in turn related to a language impaired classification. In addition, a nonproficient classification was related to being tested in Spanish, in turn related to having a speech person at the IEP meeting and an eventual language impaired diagnosis. Finally, a nonproficient classification was related to having been in bilingual or ESL placement, in turn related to having a larger number of speech tests administered and final classification as language impaired.

Academic referral reason. This variable exerted all of its influence on diagnostic category indirectly through two other variables, whether academic achievement tests were administered (β = .14), and the number of psychological tests administered (β = .14). In both cases, the relationship was positive, indicating that an academic referral reason was related to achievement tests being administered,

and to a greater number of psychological tests being administered. In both cases, these were then associated with a learning disabled classification.

Referral for oral comprehension/communication problems. In addition to its direct effect on diagnostic category, this type of referral was directly related to the number of speech tests administered ($\beta = .26$). As the beta weight indicates, this type of referral was associated with a greater number of speech tests being administered, which then was related to a language impaired diagnosis.

Achievement tests administered. Although the administration of achievement tests as part of the assessment was directly related to diagnostic category, it was also related to the prescence of the special education teacher at the IEP meeting ($\beta = .13$). Specifically, this means that the administration of achievement tests was associated with the prescence of the special education teacher at the IEP, in turn directly related to a learning disability diagnosis.

Number of psychological tests administered. The number of psychological tests administered, as mentioned earlier, exerted a direct influence on diagnostic category such that a greater number of such tests was associated with an LD diagnosis. In addition to this direct effect, however, it exerted an indirect effect through its relationship with two variables, the prescence of the speech clinician at the IEP ($\beta = -.15$) and the language of psychological test administration ($\beta = .17$). In general, the greater number of psychological tests administered, the less likely a speech person would be at the IEP meeting, and the more likely the diagnosis would be LD. Also, the greater the number of psychological tests administered, the

the more likely that testing included either Spanish or a combination of English and Spanish together. In turn, the more that testing was done in Spanish or bilingually, the more likely that a speech person was at the IEP and the more likely the diagnosis would be language impaired.

Number of speech tests administered. This variable exerted a direct and substantial effect on the final diagnostic category, but in addition was indirectly related through its association with the prescence of the speech person at the IEP (β = .22). Specifically, the more speech tests administered, the more likely the speech/language clinician would be at the IEP, and the more likely the diagnosis would be language impaired.

Language of psychological testing. The final variable which exerted indirect effects on the dependent variable was the language of psychological testing. This variable was directly and positively related to the prescence of the speech/language clinician at the IEP (β = .13). Bilingual or Spanish-only testing was associated with the prescence of the speech/language clinician at the IEP, in turn directly associated with a diagnosis of language impaired.

As a means of further exploring the contribution of the predictor variables in the model to the dependent variable, a forward stepwise multiple regression analysis was conducted. This was carried out for the purpose of examining the unique amount of variance in the dependent variable accounted for by each variable over and above the accounted for by previously entered variables. Using this procedure, a separate multiple regression coefficient is produced for each unique variable entered into the equation. Table IV(19) presents the R^2 for each

combination of variables in the model, as well as the R^2 change from the previous combination of variables.

Table IV(19)

R^2 and R^2 Change Values for Forward Stepwise Multiple Regression Analyses with Category as the Dependent Variable

Step	Variable Name	R^2	R^2 Change
1.	Birth year	.11	--
2.	Oral referral	.17	.06
3.	Academic referral	.23	.06
4.	School language classification	.26	.03
5.	US born	.27	.01
6.	Previous bilingual education/ESL	.27	.01
7.	Number of Psychological tests given	.35	.08
8.	Number speech tests given	.38	.03
9.	Achievement tests given	.40	.01
10.	Language of psychological test	.40	.02
11.	Speech person at IEP	.42	.02
12.	Special education teacher at IEP	.43	.01

Summary

In general, the constellation of factors which are included in the present model produce an R^2 of .39, which means that these factors when taken together account for close to 40% of the variance in diagnostic category. Although this model only included the diagnostic

categories of learning disability and language impaired, these two categories alone account for over 80% of the classifications assigned.

Overall, the model seems to indicate that there are two "paths" that a student may move through on the way to being classified into one of these categories. One is what might be called an "academic/psychological" track, which is associated with an academic referral reason, the administration of achievement and psychological tests, and the prescence of the special education teacher at the IEP meeting. This track is associated with a learning disability diagnosis. A second track is what might be termed a "speech/language" track, which is associated with a home language of Spanish, prior participation in bilingual education, a referral for speech related reasons, the administration of speech tests, psychological tests in Spanish, and the prescence of the speech/language clinician at the IEP meeting. The first track, the "academic/psychological" track, appears to be more characteristic of older students, while the "speech/language" track appears to be more characteristic of younger students.

V. Discussion

The results of the present study provide a substantial amount of data on the descriptive characteristics of Hispanic students who are first-time referrals for special education. In addition, the study provides an examination of background characteristics and school factors which have a bearing on eventual diagnostic classification for these students. Each of these aspects of the investigation will be discussed in turn.

Descriptive Data

The data on the background characteristics of the students suggested that most of the referrals were male (about 64%) of the sample, that most of the referrals were younger students (about 8.6 years on the average), and that about 11% of the sample had siblings in special education. This is interesting in light of the findings of Mirkin, Marston, and Deno (1982) that teachers refer approximately two and a half times more boys than girls. This is also consistent with the findings of Richey, Potter, and Ysselkyke (1980) and Richie, Ysseldyke, Potter, Regan, and Greener (1980) who found decisions to refer are influenced by both sex and whether a students has an older sibling in special education. Although it may be hypothesized that the larger numbers of males in the sample may be due to the fact that males possibly exhibit more aggressive behavior, data on the reasons for referral tended to show that referrals for academic and other reasons were much more frequent.

The demographic data on the students in the sample indicated that most of the students were born in the U.S. (about 69%), but the majority of the parents were born in Mexico (about 71%). This family

background information accounts for the fact that virtually all of the sample either use or are exposed to Spanish (or a combination of Spanish and English). Interestingly, about 30% of the sample is classified as Fluent or Proficient. This needs to be considered in light of Cummin's (1984) distinction between surface fluency, acquired after about 1-2 years of exposure to English, and cognitive/academic proficiency, acquired after about five years of exposure to a language. For example, it is possible that the everyday conversational skills of the students are being considered as indicators of higher-order cognitive linguistic levels of functioning.

Close examination of the student data indicates that there are several factors which existed before the actual referral which may have predicted a future referral. For example, about 44% of the students had participated to some extent in resource room programs prior to referral. (It is possible in some districts to participate in this program without an actual IEP, for example if the Child Study Team recommends such a trial placement before the actual "official" referral). Additionally, examination of student grades in the years prior to referral indicates that they tend to cluster in the "C" to "D" range, suggesting prior academic difficulties. Further, about a third of the sample had been in bilingual education or ESL classes prior to referral. It is possible that the referral for special education may have been a secondary response to the academic problems in these cases after bilingual or ESL intervention proved unsuccessful. Interestingly, most of the students did not have previous medical problems which may have been related to eventual referral.

The reasons for referral for this particular group of students suggested that behavior problems were relatively unimportant in the

referral process. This is in contrast to other studies which have found a greater role for behavioral problems (Algozzine, Christenson, Pianta, Thurlow, and Ysseldyke, 1982; Thurlow, and Ysselkyke, 1980). Much more prevalent were problems related to low academic achievement, especially reading. Interestingly, 22% of the students were referred for reasons related to oral skills and/or comprehension problems. Given the linguistic characteristics of the present sample, this question merits further investigation. For example, about 20% of the final sample was finally diagnosed as language impaired, a much higher than expected number. One possibility is that normal aspects of second language acquisition are being confounded with developmental language problems. As one example, Krashen (1982) has suggested that an initial "orienting" period of silence in a normal and natural part of the sequence of second language acquisition. Without knowledge of this normal developmental step, however, such a period of silence might be confounded for a developmental delay. Given the unexpected numbers of students referred for oral problems, and eventually diagnosed as language impaired, this finding warrants closer scrutiny.

Since a large number of students in the sample could be considered Spanish-speaking or bilingual, it was not surprising that about 47% of the students were tested with some type of informal measure in addition to standardized measures. However, only about 23 % of the sample were tested using a combination of English and Spanish, and on .06% were tested in Spanish only. Interestingly, some of the most common psychoeducational tests were the Bender, the Leiter, and the Draw A Person test. It can be hypothesized that the extensive use of these measures represents the schools attempt to address the language

differences of the students, since all three of these instruments are largely nonverbal. However, only about .01% of the sample had a home visit as part of the assessment process. Obviously, this is only one indicator of the extent to which home and background factors are considered in the assessment process, but in light of the special difficulties encountered in the assessment of students such as those in the present study, it appears to be rather infrequent. The most common psychometric instruments used as part of assessment were the WISC-R and the WRAT, suggesting that traditional psychometric procedures continue to play an important role.

One of the key decision making points in the whole referral-placement process is the IEP. The data indicated that about 65% of the parents attended the IEP meeting, or about two-thirds of the sample. This may appear to be a high number, given the probable transportation, linguistic, and other barriers facing the parents of the students in the sample. On the other hand, given the crucial nature of the meeting to a given student's educational career, and the intent of the legislation governing such meeting to incorporate parental participation, such a figure seems low.

One of the most interesting findings of the study was related to the eventual diagnostic classifications arrived at by the IEP teams. As opposed to what may have been expected with this sample, there were a negligible number of students labeled as mentally retarded. This was in contrast to the much earlier findings of Mercer (1973), who discovered extensive overrepresentation of Hispanics in this category. This can perhaps be attributed to the recent legal pressures not to label minority students EMR. On the other hand, about 63% of the

sample was classified as learning disabled. This is a large number even in comparison to the 40% figure that represents the percentage of handicapped students nationwide who received special education services during the 1983-84 school year (cited in Algozzine, 1985). A surprising finding was the relatively large number of students referred for language related problems and who eventually were labeled as language impaired (20% of the sample). Together, these two categories comprised approximately 83% of the eventual classifications. Again, this raises the possibility that normal second language acquisition is being confounded with language related delays. In addition, it raises the possibility that there are substantial difficulties in differentiating low achieving students.

Although the vast majority of students who were referred in this study ended up receiving an IEP and a diagnostic classification, about 14% of those initially referred were not classified. As Mercer (1973), Mehan et al. (1983) and others have pointed out, there are any number of factors unrelated to a given child's level of functioning that may account for eventual academic outcomes. The "slippage" represented by this 14% of the sample may be a reflection of some of these factors, such as insufficient testing time, lack of funding for additional placements, etc. On the other hand, it might be expected that not all of the initial referrals were appropriate, and therefore this 14% represents appropriate decision making by the IEP teams and assessment personnel involved.

The final aspect of the descriptive information of interest with this group of students was the placement outcomes decided upon by the IEP team. Although 36% were channeled primarily into the regular

classroom, extensive use was made of the resource specialist program for almost half of the sample. In spite of the preponderance of mildly handicapping conditions represented in the eventual diagnostic outcomes, however, about 22% of the sample received instruction ins self-contained settings. In addition, about 24% of the students received speech/language services, indicating that the role of this specialist has assumed major importance for this population of students. Interestingly, bilingual placements were relatively infrequent for this group of students. It appears that in some cases the bilingual and special education interventions are mutually exclusive once a child has entered the special education referral path. More specific information about the exact nature of the intersection of these programs is needed.

Predictive Analysis

The predictive analysis in this study was limited to the categories of learning disabilty and language impaired, thereby limiting generalizations to other diagnostic categories. However, as indicated earlier, these two categories did account for over 80% of the students who were eventually classified.

One of the interesting findings from the path model was the suggestion that there are two "tracks" which are influential in determining the eventual diagnostic outcome. The "academic" track, as described earlier, appears to be associated mainly with an eventual classification of learning disability. The "speech/language" track, on the other hand, appears to be mainly associated with an eventual classification of language impairment. Interestingly, the substantial relation of reason for referral with eventual classification for the

language impaired students suggests that a process of "testing to the referral" is occurring. In other words, the diagnostic tests administered to the student are a direct result of the reason they are referred. This aspect of the decision making process has been suggested in earlier research by Casey, Foster, Thurlow, and Ysseldyke (1983). In addition, as the model suggests, there is some relationship between the reason for referral, the types of tests administered, and the constellation of the IEP team.

One hypothesis with respect to the above findings is related to the work on decision making reviewed earlier in the report. The "rational" model, as embodied in P.L. 94-142 and other legal and policy mandates, presupposes a sequential, logical, and rational process. On the other hand, a "social system" model acknowledges that decision making is embedded in a social context and is influenced by the social and interactional activity as well as by the accompanying everyday and practical constraints such as limited budgets and time. Consistent with other research (Mehan et al., 1983; Algozzine, Christenson, and Ysseldyke, 1981), the present study suggests that the second model best reflects actual practice. It is possible that the assumptions underlying the legal and policy perspectives on decision making activity need reexamination given the discrepancy between the ideal "rational" model and actual everyday practice.

The most interesting aspect of the predictive analysis is that the constellation of factors used in the model do not include IQ scores, assessment data, grades, and other pieces of information that would be crucial from the perspective of a rational approach to decision making. The absence of these variables in the model reported earlier was not a

deliberate omission, but rather due to the lack of this data in the files examined. Nevertheless, even with these variables omitted, about 40% of the variance in the diagnostic placement could be accounted for. This is a substantial amount, especially in light of the fact that the variables included are essentially student background and referral-related variables.

Summary

One of the problems with the present study is that it was limited to data found in student files, and therefore could not address the actual process of events surrounding the referral/placement activities. If indeed the social system model is more reflective of these events, as the present study and other research suggests, then the socially negotiated character of these events needs to be investigated. It is clear that strict psychometric data is not accounting for a large portion of the variance in diagnostic category, as evidenced in the path model presented here. More specific information on the variables that are influencing educational decision needs to collected, for example on the linguistic characteristics of low achieving students at risk for referral, on the activities of the speech/language clinician, on the knowledge of classroom teachers (usually the first link in the referral process) with respect to second language acquisition, etc.

One of the major findings of the present study is the new prevalence of the category of language impaired and the increasingly important role of the speech/language clinician. As mentioned previously, it is possible that everyday conversational skills (acquired after about 1-2 years of exposure) are being confounded with higher order cognitive linguistic English skills, and that normal

aspects of second language acquisition are being confounded with abnormal developmental language delays. Both process-based studies and studies of a longitudinal nature, to explore eventual short-term academic and long-term educational career outcomes are needed to address these questions.

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APPENDIX A

Central File Data Sheet

NOTE: ***This sheet is to be detached from the data collection instrument as soon as possible and placed in a central, locked file. When this sheet is detached, there should be no identifying information on the data sheet which might allow the identification of any student, school district, or individual school. All students, school districts, and schools will be referred to by code number only.***

Student name: _____

code number: _____

School district: _____

code number: _____

School: _____

code number: _____

Child's teacher at time of referral: _____

code number: _____

Current teacher: _____

code number: _____

Psychologist who completed assessment: _____

code number: _____

Face Sheet

Data collection information

1. Data collector: _____ _____

2. Date of data collection: _____ _____

Student information

3. Student: _____ _____
(code number only)

4. Student's sex: _____ _____

5. Student's date of birth: _____ _____

6. Student's place of birth: _____ _____
(country, state, city)

School information

7. Date entered school district: _____ _____

8. Current School district: _____ _____
(code number only)

9. Current School: _____ _____
(code number only)

10. Current Grade: _____ _____

1. Current Placement: _____ _____

Family Characteristics

12. Is a language other than English spoken in the home? _____ _____
If yes, specify which.

13. Is the child exposed to a language other than English outside of the home, i.e., grandparents? *(Specify which language, as well as where, how often, and who, uses it.)* _____

14. Place of birth of father: _____ _____
(city and state)

15. Place of birth of mother: _____ _____
(city and state)

16. Father's education level: _____ _____
(highest grade completed)

17. Mother's education level: _____ _____
(highest grade completed)

18. Father's place of education *(city, state, country if available. If more than one place, list)* _____

19. Mother's place of education *(city, state, country if available. If more than one place, list)* _____

20. Legal guardian other than parent? _____ _____
(1 = yes, 2 = no)
If yes, specify who.

21. Where is child living? _____ _____
(e.g., home, institution, with grandparents, etc.)

22. Background of father: _____ _____
(1 = urban, 2 = rural, 3 = no data)

23. Background of mother: _____ _____
(1 = urban, 2 = rural, 3 = no data)

24. Presence of extended family: _____ _____
(1 = yes, 2 = no)
If yes, specify who.

25. Number of rooms in house: _____ _____

26. Number of persons in house: _____ _____

27. Is father living at home? _____ _____
(1 = yes, 2 = no)

28. Is mother living at home? _____ _____
(1 = yes, 2 = no)

29. Habits/behavior of child at home *(from parents' perspective).* _____
(Note source of information in the file, e.g., psychologist's report, file cover, etc.):

30. Target child's birth order? _____ _____

31. Are there any other siblings in special education? _____ _____
(1 = yes, 2 = no)
If yes, specify:

32.

Sibling Information

Sibling #	Sex *(1 = M, 2 = F)*	Age *(Years)*	Primary Language *(1 = Eng, 2 = Span)*

Student Characteristics

33. Number of days missed in school during 1983-84 school year: _____ _____

34. Number of days missed in school during 1982-83 school year: _____ _____

35. Number of days missed in school during 1981-82 school year: _____ _____

Educational Disruptions

36. List all **schools** that the child has attended during his school years. _____

37. List all **school districts** that the child has attended during his school years. _____

38. List all **instructional programs** that the child has been enrolled in *(special programs, pull-out classes, etc.)* _____

39. Age first enrolled in United States public schools: _____ _____
(in years and months, if possible)

40. Number of retentions: _____ _____
(provide a number)

41. Number of accelerations: _____ _____
(provide a number)

42. Number of months of school outside the United States: _____ _____

43. Where? _____

44. Child's age of arrival in the United States: _____ _____

45. Child's length of residence in the United States: _____ _____
(# of months, if possible)

46. How many years of preschool/early intervention? _____ _____

47. Description *(or name or program, if well-known, such as Head Start)*: _____

Medical History

48. Weight: _____ _____

49. Height: _____ _____

50. Child's general health history and present status? *(Include medications, hospitalizations, specialists seen, counseling, etc. Be as specific as possible.)* _____

Teacher Evaluation and Academic Achievement

Standardized Test Scores

*(*include language, if other than English)*

51.

Name of test *(include form)*	Date given	Subtest or area	%ile score	Standard score	Grade level

52.

Name of test *(include form)*	Date given	Subtest or area	%ile score	Standard score	Grade level

53.

Name of test *(include form)*	Date given	Subtest or area	%ile score	Standard score	Grade level

54.

Name of test *(include form)*	Date given	Subtest or area	%ile score	Standard score	Grade level

Teacher Evaluation

55. Teacher name: _____ _____
(code number only)

56. Date grades assigned: _____ _____

57.

Subject	Grade	Subject	Grade

58. Teacher name: _____ _____
(code number only)

59. Date grades assigned: _____ _____

60.

Subject	Grade	Subject	Grade

61. Teacher name: _____ _____
(code number only)

62. Date grades assigned: _____ _____

63.

Subject	Grade	Subject	Grade

64. Teacher name: _____ _____
(code number only)

65. Date grades assigned: _____ _____

66.

Subject	Grade	Subject	Grade

67. Teacher name: _____ _____
(code number only)

68. Date grades assigned: _____ _____

69.	Subject	Grade	Subject	Grade

'0. Teacher name: _____ _____
(code number only)

'1. Date grades assigned: _____ _____

'2.	Subject	Grade	Subject	Grade

Teacher Comments

(including interests, activities, attitude, performance, etc. If from more than one teacher, specify

73. Current teacher (1983-84) _____

74. Previous teacher (1982-83) _____

75. Previous teacher (1981-82) _____

Assessment Information

76. Home Language Survey Date: _____ _____
77. Result: _____

78. Child's primary language: _____ _____

Language Proficiency Assessment

Standardized Testing

79. Date	Test *(name, edition, form, etc.)*	Tester *name and/or position)*	English score	Spanish score

80.

Date	Test *(name, edition, form, etc.)*	Tester *name and/or position)*	English score	Spanish score

Informal Testing Information

81. Tester's comments: _____

82. Child's Lau status: *(check one)* _____

1. _____ Monolingual speaker of Spanish (speaks Spanish exclusively)
2. _____ Predominantly speaks Spanish (speaks mostly Spanish but speaks some English)
3. _____ Bilingual (speaks both languages with equal ease)
4. _____ Predominantly speaks English (speaks mostly English, but some Spanish)
5. _____ Monolingual speaker of English (speaks English exclusively)

83. Child's language classification by state or local system: *(check one)* _____

1. _____ LEP (Limited English Proficient)
2. _____ FES (Functional English Speaking)
3. _____ FEP (Fluent English Proficient)
4. _____ NES (Non English Speaking)
5. _____ LES (Limited English Speaking)
6. _____ FES (Fluent English Speaking)
7. _____ PES (Proficient English Speaking)

84. Tester's comments from assessment: _____

85. Recommendations following test results: _____

Bilingual Program

86. Is the child currently enrolled in a bilingual program? _____ _____

87. Date of entry? _____ _____

88. Type of Program? _____

1. ____ self-contained
2. ____ pull-out
3. ____ itinerant teacher
4. ____ team teaching
5. ____ Bilingual Education Learning Plan (BELP)
6. ____ other *(describe)*

89. Number of months in bilingual program? _____ _____

ESL Program

90. Is the child in an ESL program? _____ _____

91. Number of months in ESL program? _____ _____

92. Date of entry? _____ _____

93. Type of program? _____

1. ____ self-contained
2. ____ pull-out
3. ____ itinerant teacher
4. ____ team teaching
5. ____ other *(describe)*

Comments

94. Comments from Bilingual Education Learning Plan (BELP): _____

95. Comments from Lau student profile: _____

96. Comments from other student records: _____

Referral and Due Process

Referral Information

97. Reason for referral *(copy from referral form)*: _____

	Child Study Team	Child IEP Team	
98. Referral date:		*	_____
99. Meeting date:			_____
100. Parent appeal filed? *(If yes, give date:)*			_____

**Child must be referred to IEP Team after 7/1/83 to be included in study.*

01. Comments: _____

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Due Process Information

	Referral	Assessment	IEP	Placement	
02. Notification of parents?					_____
03. Parent participation?					_____
04. Translator *(if needed)*?					_____
05. Home visit?					_____

06. Comments: _____

Assessment Findings

Background Assessment Information From Psychological Evaluation for Special Education Placement

107. Code number of school psychologist: _____ _____

108. Ethnicity of school psychologist: _____ _____

109. Language fluency of school psychologist: _____ _____

10. Language in which testing was carried out: _____ _____
(1 = English, 2 = Spanish, 3 = both, 4 = translator)

11. If test translated, was translation: _____ _____
(1 = district translation, 2 = national translation, 3 = on-the-spot translation)

12. Assessment consisted of: _____ _____
(1 = formal testing only, 2 = formal and informal testing, e.g. observation)

13. Observation of child's behavior during testing *(comments of evaluator)*: _____

Assessment Data

Test 1

114. Name of test: _____ _____
(include name, form, edition, etc.)

115. Date of test: _____ _____

116. Norms: _____ _____
(1 = local, 2 = standard, 3 = no norms used)

117. List percentile or standard scores for each subtest, as well as total scores: _____

VERBAL TESTS	Scaled Score	PERFORMANCE TESTS	Scaled Score
Information		Picture Completion	
Similarities		Picture Arrangement	
Arithmetic		Block Design	
Vocabulary		Object Assembly	
Comprehension		Coding	
(Digit Span)		(Mazes)	
Verbal Score		Performance Score	

	Scaled Score		IQ
Verbal Score		*	
Performance Score		*	
Full Scale Score			

*Prorated from 4 tests, if necessary

Test 2

18. Name of test: _____ _____
(include name, form, edition, etc.)

19. Date of test: _____ _____

20. Norms: _____ _____
(1 = local, 2 = standard, 3 = no norms used)

21. List percentile or standard scores for each subtest, as well as total scores: _____

Test 3

122. Name of test: _____ _____
(include name, form, edition, etc.)

123. Date of test: _____ _____

124. Norms: _____ _____
(1 = local, 2 = standard, 3 = no norms used)

125. List percentile or standard scores for each subtest, as well as total scores: _____

_____

Test 4

126. Name of test: _____ _____
(include name, form, edition, etc.)

127. Date of test: _____ _____

128. Norms: _____ _____
(1 = local, 2 = standard, 3 = no norms used)

129. List percentile or standard scores for each subtest, as well as total scores: _____

143

Test 5

130. Name of test: _____ _____
(include name, form, edition, etc.)

131. Date of test: _____ _____

132. Norms: _____ _____
(1 = local, 2 = standard, 3 = no norms used)

133. List percentile or standard scores for each subtest, as well as total scores: _____

Test 6

34. Name of test: _____ _____
(include name, form, edition, etc.)

35. Date of test: _____ _____

36. Norms: _____ _____
(1 = local, 2 = standard, 3 = no norms used)

37. List percentile or standard scores for each subtest, as well as total scores: _____

138. Other assessment information from psychological report: _____

IEP Team Membership

	1	2	3	4	5	6	7	8	9
139. Specialty/title *(number from table below)*									
140. Present at meeting? *(1 yes 2 no)*									
141. Signed IEP? *(1 yes 2 no)*									
142. Agree with IEP? *(1 yes 2 no)*									

Table for IEP specialist titles:

1 = parent, 2 = child advocate, 3 = district administrative representative,
4 = regular education teacher, 5 = special education teacher,
6 = psychologist, 7 = speech/language specialist, 8 = bilingual specialist,
9 = other assessment specialist *(specify)*, 10 = child, 11 = nurse or other medical personnel *(specify)*

IEP Data: Present Levels of Performance

Academic

143. Assessed by: _____ _____

144. Date: _____ _____

145. Findings: _____
Goals and Objectives:

Social

146. Assessed by: _____ _____

147. Date: _____ _____

148. Findings: _____
Goals and Objectives:

Vocational

149. Assessed by: _____ _____

150. Date: _____ _____

151. Findings: _____
Goals and Objectives:

_____

Psychomotor

152. Assessed by: _____ _____

53. Date: _____ _____

54. Findings: _____
Goals and Objectives:

Self-Help

155. Assessed by: _____ _____

156. Date: _____ _____

157. Findings: _____
Goals and Objectives:

_____

Communication

158. Assessed by: _____ _____

159. Date: _____ _____

160. Findings: _____
Goals and Objectives:

Health

161. Assessed by: _____ _____

162. Date: _____ _____

163. Findings: _____
Goals and Objectives:

_____ _____

Assessment Recommendations

164. Further assessment suggested? _____ _____
(1 = yes, 2 = no)

165. Specify: _____

166. Eligibility as exceptional? _____ _____
(1 = yes, 2 = no)

167. Alternatives considered? _____ _____
(1 = yes, 2 = no)

168. Specify: _____

169. Category of exceptionality: _____ _____

(1 = Aphasia, 2 = Autistic, 3 = Behavior Disorder, 4 = Blind, 5 = Deaf, 6 = Deaf/blind, 7 = Developmentally handicapped, 8 = EMR, 9 = Hard of hearing, 10 = Language/speech impaired, 11 = LD, 12 = Multihandicapped, 13 = Other health impaired, 14 = Orthopedically handicapped, 15 = Partially sighted, 16 = Seriously emotionally disturbed, 17 = TMR, 18 = Other [specify] _____)

170. Instructional setting/program recommended: _____ _____

1 = self-contained class
2 = resource room
3 = regular classroom
4 = special education school
5 = bilingual classroom
6 = other *(specify)*

171. Extent of participation in regular program? _____

172. Provisions for transition into regular program? _____

173. Designated instruction and services	Responsible person	Beginning date	Duration	Setting
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				

174. Other related services				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				

APPENDIX B

USER'S GUIDE TO THE LONGITUDINAL STUDY I:
An Examination of Special Education Decision-Making with Hispanic First-time Referrals in Large Urban School Districts

Handicapped-Minority Research Institute
at the
SWRL Educational Research & Development
4665 Lampson Avenue
Los Alamitos, CA 90720
(213) 598-0481

September 30, 1985

Submitted to the U.S. Department of Education
Office of Special Education Programs
Contract No. 300-83-0273

Contents

Codebook: Longitudinal Study I

Tape Specifications

Variable List

Variable Frequencies

LONGITUDINAL STUDY I CODEBOOK

Student Information

	Column(s)	Variable
3. Student: _____ (code number only)	1-6	(CASEID)
4. Student's sex: _____	7	(SEX)
5. Student's date of birth: _____	8-9	(BIRTHMO)
	10-11	(BIRTHDAY)
	12-13	(BIRTHYEA)
6. Student's place of birth: _____ (Country: 1=USA, 2=Mexico, 3=P.R., 4=Cuba, 5=Other)	14	(BIRTHPL)

School Information

7. Year entered school district: _____	15-16	(YEARDIST)
8. Current school district: _____ (code number only)	17-18	(DISTRICT)
9. Current school: _____ (code number only, 1983-84)	19-23	(SCHOOL)
10. Current grade: _____ (1983-84)	24-26	(GRADE)
11. Placement (0=no, 1=yes):		
Regular Classroom	27	(REG1)
Resource Specialist Program (RSP)	28	(RSP1)
Learning Disabled (LD)	29	(LD1)
Designated Instruction of Services (DIS)	30	(DIS1)
Language of Speech Services (LAS)	31	(LAS1)
Special Day Class (SDC) at regular ed. site	32	(SDCREG1)
Special Day Class (SDC) at special ed. site	33	(SDCSE1)
Bilingual Education Program (ILP)	34	(ILP1)
English as a Second Language (ESL)	35	(ESL1)
Home Teaching	36	(HT1)
Other	37	(OTHER)

Family Characteristics

12.	Is a language other than English spoken in the home?___ If yes, specify which. 01=English, 02=Spanish, 04=Other, 99=missing data	39-40	(NELB)
14.	Place of birth of father:_____ (Country: 1=USA, 2=Mexico, 3=P.R., 4=Cuba, 5=Other)	41	(FBIRTHPL)
15.	Place of birth of mother:_____ (Country: 1=USA, 2=Mexico, 3=P.R., 4=Cuba, 5=Other)	42	(MBIRTHPL)
20.	Legal guardian other than parent?_____ (0=no, 1=yes)	43	(GUARDIAN)
21.	Is child living at home:_____ (0=no, 1=yes)	44	(LIVEHOME)
27.	Is father living at home?_____ (0=no, 1=yes)	45	(DADHOME)
28.	Is mother living at home?_____ (0=no, 1=yes)	46	(MOMHOME)
29.	Were habits/behavior of child at home (from parents' perspective) specified? (0=no, 1=yes) (Note source of information in the file, e.g., psycholgist's report, file cover, etc.):	47	(HOMEBEH)
30.	Target child's birth order?_____	48-49	(BIRTHORD)
31.	Are there any other siblings in special education?_____ (0=no, 1=yes)	50	(SIBSE)

Sibling Information

32.	Number of siblings	51-52	(SIBNUM)

Student Characteristics

33.	Number of days missed in school during 1983-84 school year (give #):	53-54	(ABSENT1)
34.	Number of days missed in school during 1982-83 school year (give #):	55-56	(ABSENT2)
35.	Number of days missed in school during 1981-82 school year (give #):	57-58	(ABSENT3)

Educational Disruptions

36.	All schools that the child has attended during his school years (Do not include pre-schools)	# schools 59-60	(SCHOOLS)
38.	List all instructional programs that the child has been enrolled in (0=no, 1=yes): (special programs, pull-out classes, etc.--do not include the latest IEP placement)		
	Resource Specialist Program (RSP)	61	(RSP2)
	Learning Disabled (LD)	62	(LD2)
	Designated Instruction and Services (DIS)	63	(DIS2)
	Language and Speech Services (LAS)	64	(LAS2)
	Special Day Class (SDC) at regular ed. site	65	(SDCREG2)
	Special Day Class (SDC) at special ed. site	66	(SDCSE)
	Bilingual Education Program (ILP)	67	(ILP2)
	English as a Second Language (ESL)	68	(ESL2)
	Home Teaching	69	(HT2)
	Math-Lab/Remedial	70	(MATHREM2)
	Reading-Lab/Remedial	71	(READREM2)
	Other	72	(OTHER)
39.	Age first enrolled in United States public schools:_____ (in years and months, if possible)	73-74	(NUMYEAR)
		75-76	(NUMMO)
40.	Number of retentions:_____ (provide a number) (up to 1983-84)	77	(RETENT)
41.	Number of accelerations:_____ (provide a number) (up to 1983-84)	78	(ACCEL)
44.	Child's age of arrival in the United States:_____	79-80	(AOA)

CARD 2

Medical History

50. Has the child had any medical condition that would disrupt his/her education? (Include medications, hospitalizations, serious accidents, chronic diseases, etc.) _____ (0=no, 1=yes) — 1 — (MEDICA

Specify (0=no, 1=yes):

Hearing problem	2	(HEARING)
Vision problem	3	(VISION)
Serious chronic condition	4	(CHRONIC)
Serious head injury	5	(HEADINJ)
Hospitalization for other serious medical problem during school year	6	(HOSPITAL)
Other	7	(OTHERCON)

TEACHER EVALUATION AND ACADEMIC ACHIEVEMENT

Standardized Test Scores
(The latest test not farther than 1982/83)

51. Date (month/year)-CAT		8-9	(CATMO)
		10-11	(CATYEAR)
Level of test-CAT		12-13	(CATLEV)
Student grade level at testing-CAT		14-16	(CATGRADE)
Total Reading score:	Raw score (RS)	17-18	(CATREADR)
	Standard score (SS)	19-21	(CATREADS)
Total Language score:	Raw score (RS)	22-23	(CATLANGR)
	Standard score (SS)	24-26	(CATLANGS)
Total Math score:	Raw score (RS)	27-28	(CATMATHR)
	Standard score (SS)	29-31	(CATMATHS)
Total Battery score: Raw score (RS)		32-34	(CATTOTR)
	Standard score (SS)	35-37	(CATTOTS)
52. Date (month/year)-(CTBS)-Eng Form of the test (1=S&T, 2=U&V)		39-40	(CTBSMO)
		41-42	(CTBSYEAR)
(Forms U&V) 01=A, 02=B, 03=C, 04=D, 05=E, 06=F, 07=G, 08=H, 09=J, 10=K (Forms S&T) 01=1, 02=2, 03=3, 04=4, 05=A, 06=B, 07=C		43-44	CTBSFORM))
Level of test-(CTBS)-Eng		45-46	(CTBSLEV)
Student grade level at testing (English form)		47-49	(CTBSGRAD)
Total Reading score:	Raw score	50-51	(CTBSREAR)
(English Form)	Standard score	52-54	(CTBSREAS)
Total Language score:	Raw score	55-56	(CTBSLANR)
(English Form)	Standard score	57-59	(CTBSLANS)
Total Math score:	Raw score	60-61	(CTBSMATR)
(English Form)	Standard score	62-64	(CTBSMATS)

Total Battery score:	Raw score	65-67	(CTBSTOTR)
(English Form	Standard score	68-70	(CTBSTOTS)
Total Pre-reading:	Raw score	71-72	(CTBSPRR)
(English Form)	Standard score	73-75	(CTBSPRS)
Total Alphabet:	Raw score	76-77	(CTBSALPR)
(English Form)	Standard score	78-80	(CTBSALPS)
			CARD 3
Total Visual-audio:	Raw score	1-2	(CTBSVAR)
(English Form)	Standard score	3-5	(CTBSVAS)
53. Date (month/year)-(CTBS)-Espanol		7-8	(ESPMO)
		9-10	(ESPYEAR)
Level of test-(CTBS)-Espanol		11-12	(ESPLEV)
Student grade level at testing		13-15	(ESPGRADE)
Total reading score:	Raw score	16-17	(ESPREADR)
(CTBS/Espanol)	Standard score	18-20	(ESPREADS)
Total language score: Raw score		21-22	(ESPLANGR)
(CTBS/Espanol)	Standard score	23-25	(ESPLANGS)
Total Math score:	Raw score	26-27	(ESPMATHR)
(CTBS/Espanol)	Standard score	28-30	(ESPMATHS)
Total Battery score:	Raw score	31-33	(ESPTOTR)
(CTBS/Espanol)	Standard score	34-36	(ESPTOTS)
Total Pre-Reading score:	Raw score	37-38	(ESPPRR)
(CTBS/Espanol)	Standard score	39-41	(ESPPRS)
Total Alphabet score:	Raw score	42-43	(ESPALAR)
(CTBS/Espanol)	Standard score	44-46	(ESPALAS)
Total Visual-Audio score:	Raw score	47-48	(ESPVAR)
(CTBS/Espanol)	Standard score	49-51	(ESPVAS)

Teacher Evaluation

S
C
O
R
E

E/O A-4
G B-3
S/O C-2
N D-1
U F-0

57. Subject (1983-84)	Grade	
Language	53	(TELANG1)
Reading	54	(TEREAD1)
Math	55	(TEMATH1)
Spelling	56	(TESPELL1)
English (J.H. & H.S.)	57	(TEENG1)
Science	58	(TESCI1)
Work habits/behavior	59	(TEWORKH1)
Language - Spanish	60	(TESPANL1)
Reading - Spanish	61	(TESPANR1)
Spelling - Spanish	62	(TESPANS1)
Language - ESL	63	(TEESLL1)
Reading - ESL	64	(TEESLR1)
Spelling - ESL	65	(TEESLS1)

60. Subject (1982-83)	Grade	
Language	67	(TELANG2)
Reading	68	(TEREAD2)
Math	69	(TEMATH2)
Spelling	70	(TESPELL2)
English (J.H. & H.S.)	71	(TEENG2)
Science	72	(TESCI2)
Work habits/behavior	73	(TEWORKH2)
Language - Spanish	74	(TESPANL2)
Reading - Spanish	75	(TESPANR2)
Spelling - Spanish	76	(TESPANS2)
Language - ESL	77	(TEESLL2)
Reading - ESL	78	(TEESLR2)
Spelling - ESL	79	(TEESLS2)

BILINGUAL LANGUAGE PROFICIENCY AND BILINGUAL INSTRUCTION

Assessment Information

CARD 4

77. Home Language Survey (1=Eng, 2=Sp, 3=both, 4=other):

Language learn speak first	1	(FIRSTLAN)
Language child use home	2	(HOMELANG)
Language parent use with child	3	(PARLANG1)
Language adults use each other	4	(PARLANG2)
# of non-English responses to Home Language Survey	5	(HLSNELR)

78. Child's primary language:_____ 6 (PRIMLANG)

Language Proficiency Assessment

Code the lastest language assessment before IEP.

79. LAB level	8	(LABLEVEL)
LAB date given (month, year)	9-10	(LABMO)
	11-12	(LABYEAR)
LAB English Score	13-14	(LABENG)
LAB Spanish Score	15-16	(LABSPAN)
79. LAS level	17	(LASLEVEL)
LAS date given (month/year)	18-19	(LASMO)
	20-21	(LASYEAR)
LAS English Score	22-23	(LASENG)
LAS Spanish Score	24-25	(LASSPAN)
79. BINL date given	26-27	(BINLMO)
	28-29	(BINLYEAR)
BINL English score	30-33	(BINLENG)
BINL Spanish score	34-37	(BINLSPAN)

79. Dos Amigos date given	38-39	(DAMO)
	40-41	(DAYEAR)
Dos Amigos English score	42-43	(DAENG)
Dos Amigos Spanish score	44-45	(DASPAN)
79. IDEA level	46	(IDEALEV)
IDEA date given	47-48	(IDEAMO)
	49-50	(IDEAYEAR)
IDEA English score	51-52	(IDEAENG)
IDEA Spanish score	53-54	(IDEASPAN)
79. BSM level	55	(BSMLEV)
BSM date given	56-57	(BSMMO)
	58-59	(BSMYEAR)
BSM English score	60-61	(BSMENG)
BSM Spanish score	62-63	(BSMSPAN)
81. Was any informal language testing done _____ (0=no, 1=yes)	64	(INFORMAL)
82. Child's Lau status: (check one)	65	(LAUSTAT)

1. ____ Monolingual speaker of Spanish (speaks Spanish exclusively
2. ____ Predominantly speaks Spanish (speaks mostly Spanish but speaks some English)
3. ____ Bilingual (speaks both languages with equal ease)
4. ____ Predominantly speaks English (speaks mostly English, but some Spanish)
5. ____ Monolingual speaker of English (speaks English exclusively

83. Child's language classification by state or local system: (check one)	66	(LANGCLAS)

0. ____ NES/NEP (Non English Speaking/Proficient)
1. ____ LES/LEP (LIMITED ENGLISH SPEAKING/PROFICIENT)
2. ____ FES (FUNCTIONAL ENGLISH SPEAKING)
3. ____ FES/FEP/PES (FLUENT/PROFICIENT ENGLISH SPEAKING/ PROFICIENT

INSTRUCTION

Bilingual Program

86. Has child ever been in a bilingual program?_____ (0=no, 1=yes)	68	(BE)
88. Type of Program? 1. ___ self contained 2. ___ pull-out 3. ___ itinerant teacher 4. ___ team teaching 5. ___ Bilingual Education Learning Plan (BELP) 6. ___ Other (describe)	69	(TYPEBE)
89. Number of months in bilingual program?___ (Up to point of IEP)	70-72	(MONTHBE)

ESL Program

90. Has child ever been in ESL program?_____ (0=no, 1=yes)	73	(ESL)
91. Number of months in ESL program?_____ (Up to point of IEP)	74-76	(MONTHESL)
93. Type of Program? 1. ___ self-contained 2. ___ pull-out 3. ___ itinerant teacher 4. ___ team teaching 5. ___ other (describe)	77	(TYPESL)

REFERRAL AND DUE PROCESS

Referral Information

CARD 5

97. Reason for referral (0=no, 1=yes):

Low academic achievement	1	(LOACH)
Reading difficulties	2	(READDIF)
Math difficulties	3	(MATHDIF)
Spelling difficulties	4	(SPELLDIF)
Poor comprehension skills	5	(POORCOMP)
Poor oral skills (articulation, sound confusion)	6	(POORORAL)
Behavior problem	7	(BEHAVIOR)
Does not complete task	8	(TASKCOMP)
Poor memory and retention	9	(MEMORY)
Does not follow directions	10	(DIRECT)
Other	11	(OTHEREF)
Total number of reasons	12-13	(TOTAL)

	Child Study Team	Child IEP Team		
98. Referral date:			15-16	(CSTMO1)
			17-18	(CSTYEAR1)
			19-20	(IEPMO1)
			21-22	(IEPYEAR1)
99. Meeting date:			23-24	(CSTMO2)
			25-26	(CSTYEAR2)
			27-28	(IEPMO2)
			29-30	(IEPYEAR2)

Due Process Information

		Referral	Assessment	IEP	Placement		
102.	Notification of parents recorded in file?					32	(REFER1)
						33	(ASSESS1)
						34	(IEP1)
						35	(PLACE1)
103.	Parent participation?	----	----			36	(IEP2)
						37	(PLACE2)
105.	Home visit?	----		----	----	38	(ASSESS)

(0=no, 1=yes)

ASSESSMENT FINDINGS

BACKGROUND ASSESSMENT INFORMATION FROM PSYCHOLOGICAL EVALUATION FOR SPECIAL Education Placement

108. Ethnicity of school psychologist:_____	40	(PSYETHN)
109. Language fluency of school psychologist:_____	41	(PSYLANG)
110. Language in which testing was carried out:_____ (1=English, 2=Spanish, 3=both, 4=translator)	42	(TESTLANG)
112. Assessment consisted of:_____ (1=formal testing only, 2=formal and informal testing, e.g., observation)	43	(ASSMNT)

Assessment Data

115-117. Most recent WISC-R: Year given	44-45	(WISCYEAR)
Most recent WISC-R: Verbal IQ	46-48	(WISCVERB)
Most recent WISC-R: Performance IQ	49-51	(WISCPERF)
Most recent WISC-R: Full Scale IQ	52-54	(WISCFULL)
119. Most recent WRAT: Year given	55-56	(WRATYEAR)
121. Most recent WRAT: Reading	57-59	(WRATREAD)
Most recent WRAT: Math	60-62	(WRATMATH)
Most recent WRAT: Spelling	63-65	(WRATSPEL)
125. PIAT total test score	66-68	(PIATTOT)
129. PPVT total test score	69-71	(PPVTTOT)
114-138. Number of tests in Spanish	72	(SPANTEST)
Total number of standardized tests	73-74	(TESTNUM)
Standardized test given (0=no, 1=yes):		

CARD 6

Beery	1	(BERRY)
Bender	2	(BENDER)
Brigance	3	(BRIGANCE)

167

Detroit Test	4	(DETROIT)
Draw a Person	5	(DRAW)
Leiter	6	(LETTER)
PIAT	7	(PIAT)
PPVT	8	(PPVT)
Vineland Maturity	9	(VINELAND)
Woodcock Johnson	10	(WOODCOCK)

140. Present at IEP (0=no, 1=yes):

(1) Parent	12	(PARENT)
(2) Child advocate	13	(CHILDAD)
(4) Regular Ed Teacher	14	(REGTEACH)
(5) Special Ed Teacher	15	(SETEACH)
(6) Psychologist	16	(PSYCH)
(7) Speech/Language Specialist	17	(SPEECH)
(8) Bilingual Specialist	18	(BILING)
(10) Child	19	(CHILD)
(12) Translator	20	(TRANS)

IEP DATA: PRESENT LEVELS OF PERFORMANCE

Academic

145.	Number of academic goals specified? (0-7)	22	(ACADGOAL)
	Number of academic objectives? (0-7)	23	(ACADOBJ)

Social

148.	Number of social goals specified? (0-7)	24	(SOCGOAL)
	Number of social objectives? (0-7)	25	(SOCOBJ)

Vocational

151.	Number of vocational goals specified? (0-7)	26	(VOCGOALS)
	Number of vocational objectives? (0-7)	27	(VOCOBJ)

PSYCHOMOTOR

154.	Number of psychomotor goals specified? (0-7)	28	(PMGOALS)
	Number of psychmotor objectives? (0-7)	29	(PMOBJ)

Self-Help

157.	Number of self-help goals specified? (0-7)	30	(SELFGOA)
	Number of self-help objectives? (0-7)	31	(SELFOBJ)

Communication

160.	Number of communication goals specified? (0-7)	32	(COMMGOAL)
	Number of communication objectives? (0-7)	33	(COMMOBJ)

Health

163.	Number of health goals specified? (0-7)	34	(HEALGOAL)
	Number of health objectives? (0-7)	35	(HEALOBJ)

Assessment Recommendations

164.	Further assessment suggested?_____ (0=no, 1=yes)	37	(FURTHER)
166.	Eligibility as exceptional?_____ (0=no, 1=yes)	38	(EXCEPT)
167.	Alternatives considered?_____ (0=no, 1=yes)	39	(ALTER)
168.	Specify: # of alternatives considered?	40	(ALTERNUM)
169.	Category of exceptionality (0=no, 1=yes):		
	Aphasia	41	(APHASIA)
	Autistic	42	(AUTISTIC)
	Behavior disorder	43	(BEHAVDIS)
	Blind	44	(BLIND)
	Deaf	45	(DEAF)
	Deaf/Blind	46	(DEAFBL)
	Developmentally handicapped	47	(DEVHANDI)
	EMR	48	(EMR)
	Hard of hearing	49	(HH)
	Language/speech impaired	50	(LANGIMP)
	LD	51	(LD)
	Multihandicapped	52	(MULTI)
	Other health impaired	53	(OTHERH)
	Orthopedically handicapped	54	(ORTHO)
	Partially sighted	55	(PARSIGHT)
	Seriously emotionally disturbed	56	(EMODIS)
	TMR	57	(TMR)
	Other	85	(OTHEREX)
170.	Instructional setting/program recommended (0=no, 1=yes):		
	self-contained class	60	(SELFCONT)
	resource room	61	(RESOURCE)
	regular classroom	62	(REGULAR)
	special education school	63	(SPECED)
	bilingual classroom	64	(BILING)
	other (specify)	65	(OTHERINS)
171.	Percentage of time in regular program/day:_____ (0=none, 1=part time, 2=full time)	66	(PERCENT)
173.	Number designated instruction and services_____	67	(SERVICES)

Was speech/language services specified?_____	68	(LANGSERV)

Speech/Language Assessment

176. Ethnicity of Speech Pathologist:_____ (1=Anglo, 2=Hispanic, 3=Other)	69	(SPATHETH)
177. Language fluency of Speech Pathologist_____	70	(SPATHLAN)
178. Language of Speech testing_____ (1=English, 2=Spanish, 3=both)	71	(SPTEST)
180. Assessment consisted of:_____ (1=formal only, 2=formal and Inf.)	72	(ASSMNT2)

CARD 7

180a. Domains of communication in which findings were reported (0=no, 1=yes):

1: Phonology	1	(PHONO1)
2: Morphology	2	(MORPH1)
3: Syntax	3	(SYNTAX1)
4: Semantics	4	(SEMAN1)
5: Pragmatics	5	(PRAG1)
6: Social communication skills	6	(BICS1)
7: Academic communication skills	7	(CALP1)
8: Overall communication skills	8	(OVERALL1)
9: Auditory processing	9	(AUDIT1)
10: Voice	10	(VOICE1)
11: Fluency	11	(FLUENCY1)

180b. Domains of communication in which goals and objectives were reported (0=no, 1=yes):

1: Phonology	13	(PHONO2)
2: Morphology	14	(MORPH2)
3: Syntax	15	(SYNTAX2)
4: Semantics	16	(SEMAN2)
5: Pragmatics	17	(PRAG2)
6: Social communication skills	18	(BICS2)
7: Academic communication skills	19	(CALP2)
8: Overall communication skills	20	(OVERALL2)
9: Auditory processing	21	(AUDIT2)
10: Voice	22	(VOICE2)
11: Fluency	23	(FLUENCY2)

181. Number of speech tests	25-26	(SPTESTNU)
182. Number of Spanish speech tests	27	(SPANSP)

183. Speech test given (0=no, 1=yes):

ACLC - Audit Comprehension of language in children	28	(ACLC)
Boehm	29	(BOEHM)
Carrow Test of Auditory Comprehension of Language	30	(CTACL)
CELI - Carrow Elicited Language Inventory	31	(CELI)
Del Rio	32	(DELRIO)
DMVI - Development Test of Visual Motor Integration	33	(DMVI)
Fisher - Logeman	34	(FISHER)
Goldman - Fristoe Auditory Skills battery/Woodcock	35	(FRISTOE1)
Goldman - Fristoe (Articulation)	36	(FRISTOE2)
Lindamood Auditory Concept. Test	37	(LACT)
NSST - Northwest Syntax Screening Test	38	(NSST)
PPVT	39	(PPVT2)
Picture Story Language Test	40	(PSLT)
SPELT - Structure Photographic Language Test	41	(SPELT)
TACL - Test of Auditory Comprehension of Language	42	(TACL)
Token Test	43	(TOKEN)
TOLD - Test of Oral Language Development	44	(TOLD)
TOWL - test of oral and Written Language	45	(TOWL)
Woodcock-Johnson	46	(WOODJOHN)
Language Sample	47	(LANGSAMP)
Other	48	(OTHERSP)

184. Is child communicative handicapped _____ (0=no, 1=yes) 50 (COMMHAND)

185. In what areas (0=no, 1=yes):

1: Phonology	51	(PHONO3)
2: Morphology	52	(MORPH3)
3: Syntax	53	(SYNTAX3)
4: Semantics	54	(SEMAN3)
5: Pragmatics	55	(PRAG3)
6: Social communication skills	56	(BICS3)
7: Academic communication skills	57	(CALP3)
8: Overall communication skills	58	(OVERALL3)
9: Auditory processing	59	(AUDIT3)
10: Voice	60	(VOICE3)
11: Fluency	61	(FLUENCY3)

186. Speech recommendations (0=no, 1=yes):

Regular classroom	63	(REG3)
Resource Specialist Program (RSP)	64	(RSP3)
Learning Disabled (LD)	65	(LD3)
Designated Instruction of Services (DIS)	66	(DIS3)
Language of Speech Services (LAS)	67	(LAS3)
Special Day Class (SDC) at regular ed. site	68	(SDCREG3)
Special Day Class (SDC) at special ed. site	69	(SDCSE3)
Bilingual Education program (ILP)	70	(ILP3)
English as a Second Language (ESL)	71	(ESL3)
Home Teaching	72	(HT3)
Other	73	(OTHER3)

APPENDIX C

Descriptive Profiles of School Districts Participating in the Study

This section provides descriptive information on each of the districts in the study and provides the context for the investigation. All of the data reported in this section was not part of the original data collected as part of this study, but rather was taken from existing state (State Department of Education), federal (Office of Civil Rights), and local school district data bases. Nevertheless, it does provide important information regarding the school districts participating in the study and therefore was included as part of this report.

General background characteristics. The following table (Table 1) presents descriptive information from the OCR and Data BicCal data bases which were used in the selection of the districts for inclusion of the study. Included in the table are data on the total district enrollment, the number and percentage of Hispanic students in special education (EMR and LD), the number of limited English proficient students by district, and the percent of Hispanic students in the district. (Although there were no data on the separate regional administrative areas in the large school district, more specific data on these regional areas is provided later in this section).

Table 1

Special Education Placement and Linguistic Background Information by District

District Name (District Enrollment)	% Hispanic ER + LD (# Hispanic Special Education)	No LEP	% Hispanic District
District 12*	83.5	1,600	88
(10,110)	(513)		
Districts 05-09 Total	27.3	106,000	45.2
(561,183)	(3,718)		
(46,978) District 05			
(56,180) District 06			
(52,207) District 07			
(49,117) District 08			
(12,062) District 09			
District 04	21.3	1,100	19.4
(38,383)	(330)		
District 11	63.1	1,100	63.5
(31,989)	(537)		

*Note: District numbers used here in place of names corresponded to the coded values for each district in the data set.

Further descriptive information regarding the districts in the investigation is provided in the Table 2 (Market Data Retrieval, Inc., 1984). Included in this data source is the number of schools in the district, the level of expenditure per student for instructional materials (textbooks, library materials, audiovisual materials, and teaching supplies), a poverty level indicator, and a bilingual education indicator. The district expenditure per student is based upon the following ranges:

HIGH = $60 +

MED = $45 - $59

LOW = Less than $45

In addition, the poverty level indicator is represented by the following ranges:

RICH = 0 - 4.9%

AVER = 5 - 24.9%

POOR = 25% +

It should be noted that the poverty level indicators are not provided for the separate regions, and therefore the indicators for each of the separate regions is an aggregate total for the entire school district.

The bilingual education indicator is a simple yes/no designation of whether the school district provides bilingual education and/or English as a second language classes.

Table 2

Selected Background Information by District

District Name	# Schools In District	Poverty Indicator	Expenditure per Student	Bilingual Education Indicator
District 12*	17	Average	High	Yes
Districts 05-09				
District 05	62	Average	High	Yes
District 06	76	Average	High	Yes
District 07	53	Average	High	Yes
District 08	52	Average	High	Yes
District 09	98	Average	High	Yes
District 04	58	Average	Medium	Yes
District 11	37	Average	Medium	Yes

*Note: District numbers used here in place of names corresponded to the coded values for each district in the data set.

A second data source, provided by State Department of Education (California Assessment Program, 1984) provides comparative information on background factors over a four-year period for districts on a statewide basis. In the following four tables (Tables 3 to 6) information on SES, percent of parents who receive Aid to Families with Dependent Children (AFDC), and percent of students who are limited-English-speaking (LES) or non-English-speaking (NES) is provided by district. As the tables demonstrate, all the districts in the study tend to rank above the 50th percentile statewide, in terms of the percentage of the school population, on AFDC and the percentage limited or non-English speaking. In contrast, all the districts tend to rank below the 50th percentile on the SES indicator.

For the SES variable, parents occupation was used as a proxy for SES for students in grades 3 and 6. The parents' occupational choices were assigned values of 1, 2, or 3, and the averages for the school district were computed. For grades 8 and 12, parents' education was used as the proxy for SES. A value of 1 to 5 was assigned for each student and average values were computed for each district. For example, an index of 3.00 would mean that on the average the parents of that school's students have attended some college.

In addition to the SES data, the percentile ranks for the each of the variables is provided. For example, if a school has a percentile rank of 60 percent AFCD, it has a higher percentage of students from families receiving AFCD than 60 percent of the schools in the state. The mean percentile ranks for each indicator, although not calculated in the original data source have been calculated and are provided in each table.

Academic achievement data. In addition to data on selected background factors, the California Assessment Program provides comparative data on academic achievement in the areas of reading, written expression, and mathematics. As with the information on background factors from this data source, information is provided only for grades 3, 6, 8, and 12. The data in the following tables (Tables 7 to 10) includes the percentile rank, on a statewide basis, in each of the domains. The mean percentile ranks for each indicator, although not calculated in the original data source have been calculated and are provided in each table.

With the exception of one district, the mean percentile ranks on scores in each of the domains are below the 25th percentile.

Racial and ethnic characteristics. Because of the nature of this research project, information on the racial and ethnic distribution of students, especially in special education placements, was of particular interest. Data provided through the California State Department of Education indicates the ethnic breakdown of students in selected special education placements by district. Because of the long-standing concern with issues of overrepresentation of minority students in classes for the mentally retarded, this is the only specific diagnostic category for which ethnic data is provided. The data for each district is provided separately in Tables 11 through 14. In general, few students tend to be in special day classes for the mentally retarded. Rather, greater numbers of students tend to be in less restrictive placements such as the resource room.

Although these data are from only the largest district, they demonstrate rather dramatically the rise in the numbers of Hispanic students in this area. Within a ten year period, there is complete reversal of the percentages of Hispanic and Anglo populations. As the table shows, Hispanic students in 1983 make up approximately 50% of the students served. Although not all of these students are limited English proficient, certainly within this group of students are large numbers of LEP students.

The provision of appropriate educational services created by the rapid and sizable shift in student characteristics would be problematic in any school district. However, it can be hypothesized that this problem might be compounded by the lack of staff available to meet the specialized needs of these students. Although membership in the same ethnic group is certainly no guarantee that a given person is qualified to provide appropriate educational services, the numbers of certificated school staff of Hispanic background provide important data for the context of this study. The following table (Table 21) provides the totals for this same district. The total Hispanic certificated school staff (8.9%) is in sharp contrast with the percentage of Hispanic students in the district.

More specific information on special education settings within this district is available in the following table (Table 22). These data permit a comparison of the ethnicity of staff with the ethnicity of special education students. Again, the comparison of pupil staff breakdowns demonstrate that the pattern in Table 21 is not confined to regular education settings.

In addition to the aggregated data provided by the preceeding tables, data on the numbers of certificated and classified staff as well as pupils for each of the administrative regions participating in this study have been made available. The regional breakdowns are provided in the following Table (Table 23).

Summary

As the data presented here suggest, the districts participating in this research are large urban school districts with relatively high percentages of minority, especially Hispanic students. The districts also tend to have large numbers of limited or non-English speaking students, and there is some evidence to suggest that this may be a rapidly increasing trend. In addition to these enrollment factors, the districts tend to have relatively large numbers of families at or below the poverty level, and in addition tend to rank relatively low academically with other school districts statewide.

Table 3

Selected Background Factors by Grade and Year: District 12*

Grade	Year	SES	PR	% AFDC	PR	% L/NC	PR
3	80-81	1.96	37	14.9	73	13.4	84
3	81-82	1.85	31	15.5	70	18.8	89
3	82-83	1.93	38	17.2	76	18.2	88
3	83-84	1.86	33	17.6	77	19.7	89
6	80-81	1.93	33	14.7	74	9.8	87
6	81-82	1.76	20	15.1	71	10.6	88
6	82-83	1.90	35	17.0	78	8.5	85
6	83-84	1.79	26	13.3	64	11.0	88
8	83-84	2.19	15	14.3	72	6.2	83
12	80-81	2.13	6	14.8	86		
12	81-82	2.18	8	14.1	86		
12	82-83	2.19	8	14.7	87		
12	83-84	2.15	7	14.7	87		
Mean percentile rank			23		77		87

*Note: District numbers used here in place of names corresponded to the coded values for each district in the data set.

Table 4

Selected Background Factors by Grade and Year: District 04*

Grade	Year	SES	PR	% AFDC	PR	% L/NES	PR
3	80-81	2.07	50	9.3	45	12.5	83
3	81-82	2.05	51	11.4	52	11.4	79
3	82-83	2.05	51	11.8	53	11.2	78
3	83-84	2.04	52	11.7	52	13.5	81
6	80-81	2.22	66	8.6	45	7.1	81
6	81-82	2.16	62	10.5	52	7.7	81
6	82-83	2.09	56	11.2	53	8.2	84
6	83-84	2.05	53	11.5	54	8.9	84
8	83-84	2.82	45	8.8	47	9.0	90
12	80-81	2.98	58	5.2	38		
12	81-82	3.02	62	5.8	42		
12	82-83	3.02	61	8.4	63		
12	83-84	3.03	59	8.2	61		
Mean percentile rank			56		51		82

*Note: District numbers used here in place of names corresponded to the coded values for each district in the data set.

Table 5

Selected Background Factors by Grade and Year:

District 05-09*

Grade	Year	SES	PR	% AFDC	PR	% L/NES	PR
3	80-81	1.79	21	24.8	92	24.8	94
3	81-82	1.80	26	25.3	92	25.1	94
3	82-83	1.76	24	24.9	91	27.6	94
3	83-84	1.76	23	24.8	91	29.4	94
6	80-81	1.82	24	23.5	92	14.1	93
6	81-82	1.85	26	23.1	90	11.6	89
6	82-83	1.84	28	23.1	89	12.4	91
6	83-84	1.81	29	23.0	89	13.0	91
8	83-84	2.65	36	20.6	88	12.7	93
12	80-81	2.88	50	17.4	92		
12	81-82	2.83	46	18.2	94		
12	82-83	2.78	40	18.3	92		
12	83-84	2.76	36	17.4	91		
Mean percentile rank			31		91		93

*Note: District numbers used here in place of names corresponded to the coded values for each district in the data set.

Table 6

Selected Background Factors by Grade and Year: District 11*

Grade	Year	SES	PR	% AFDC	PR	% L/NES	PR
3	80-81	1.61	11	11.0	53	37.1	98
3	81-82	1.58	11	12.5	57	38.4	98
3	82-83	1.65	17	13.1	59	46.7	99
3	83-84	1.63	15	13.2	59	57.8	99
6	80-81	1.78	21	10.8	56	21.8	96
6	81-82	1.76	20	13.0	63	23.7	97
6	82-83	1.74	21	13.0	63	23.9	97
6	83-84	1.71	20	12.2	58	24.9	97
8	83-84	2.16	14	13.4	69	26.1	98
12	80-81	2.50	21	10.8	74		
12	81-82	2.37	14	12.5	80		
12	82-83	2.23	9	12.9	84		
12	83-84	2.32	11	13.1	84		
Mean percentile rank			16		66		98

*Note: District numbers used here in place of names corresponded to the coded values for each district in the data set.

Table 7

Statewide Percentile Rank in Selected Academic Domains by Year: District 12*

Grade	Year	Reading	Written Expression	Mathematics
3	80-81	23	25	16
3	80-82	26	39	24
3	82-83	26	41	32
3	83-84	26	29	18
6	80-81	16	17	22
6	81-82	24	25	24
6	82-83	22	17	18
6	83-84	8	12	8
8	83-84	6	4	5
12	80-81	9	5	13
12	81-82	7	11	14
12	82-83	22	34	21
12	83-84	27	47	26
Mean percentile rank		19	24	19

*Note: District numbers used here in place of names corresponded to the coded values for each district in the data set.

Table 8

Statewide Percentile Rank in Selected Academic Domains by Year: District 04*

Grade	Year	Reading	Written Expression	Mathematics
3	80-81	45	48	47
3	81-82	49	49	49
3	82-83	41	36	50
3	83-84	41	34	40
6	80-81	52	59	64
6	81-82	56	59	58
6	82-83	43	45	55
6	83-84	29	35	44
8	83-84	35	34	43
12	80-81	50	56	58
12	81-82	54	66	65
12	82-83	38	55	63
12	83-84	42	50	68
Mean percentile rank		44	48	54

*Note: District numbers used here in place of names corresponded to the coded values for each district in the data set.

Table 9

Statewide Percentile Rank in Selected Academic Domains by Year: Districts 05-09*

Grade	Year	Reading	Written Expression	Mathematics
3	80-81	7	9	9
3	81-82	10	11	11
3	82-83	9	10	11
3	83-84	10	11	11
6	80-81	11	9	15
6	81-82	12	12	16
6	82-83	11	9	13
6	83-84	13	10	16
8	83-84	7	9	9
12	80-81	19	20	23
12	81-82	17	19	21
12	82-83	14	15	17
12	83-84	11	12	14
Mean percentile rank		12	12	14

*Note: District numbers used here in place of names corresponded to the coded values for each district in the data set.

Table 10

Statewide Percentile Rank in Selected Academic Domains by Year: District 11*

Grade	Year	Reading	Written Expression	Mathematics
3	80-81	15	19	28
3	81-82	15	18	36
3	82-83	15	20	48
3	83-84	10	13	32
6	80-81	17	28	26
6	81-82	15	20	20
6	82-83	6	7	9
6	83-84	9	6	9
8	83-84	8	15	11
12	80-81	14	17	24
12	81-82	10	11	22
12	82-83	6	8	21
12	83-84	13	17	28
Mean percentile rank		12	15	24

*Note: District numbers used here in place of names corresponded to the coded values for each district in the data set.

Table 11

District 12*--April 1985 Pupil Count

	Ethnicity/Racial Group						
Placement	Native American	Asian	Filipino	Hispanic	Black	White	Total
SDC-MR	0	0	0	3	0	2	5
SDC-TOTAL	0	2	0	173	2	35	212
RSP-TOTAL	0	1	0	332	1	28	362
DIS-TOTAL	0	1	0	201	2	33	237

*Note: District numbers used here in place of names corresponded to the coded values for each district in the data set.

Table 12

Districts 05-09*--April 1985 Pupil Count

	Ethnicity/Racial Group						
Placement	Native American	Asian	Filipino	Hispanic	Black	White	Total
SDC-MR	5	117	23	1,553	1,079	729	3,506
SDC-TOTAL	25	452	102	7,726	4,726	4,010	17,070
RSP-TOTAL	20	222	39	5,801	3,691	3,297	13,070
DIS-TOTAL	31	870	89	7,809	3,805	4,873	17,477

*Note: District numbers used here in place of names corresponded to the coded values for each district in the data set.

Table 13

District 04*--April 1985 Pupil Count

	Ethnicity/Racial Group						
Placement	Native American	Asian	Filipino	Hispanic	Black	White	Total
SDC-MR	0	14	2	38	1	88	143
SDC-TOTAL	12	69	2	341	21	562	1,007
RSP-TOTAL	31	49	2	335	31	812	1,260
DIS-TOTAL	0	67	5	135	5	414	616

*Note: District numbers used here in place of names corresponded to the coded values for each district in the data set.

Table 14

District 11*--April 1985 Pupil Count

	Ethnicity/Racial Group						
Placement	Native American	Asian	Filipino	Hispanic	Black	White	Total
SDC-MR	0	16	0	152	7	34	209
SDC-TOTAL	1	54	0	490	32	176	745
RSP-TOTAL	0	28	0	812	65	157	1,062
DIS-TOTAL	4	93	8	759	32	182	1,078

*Note: District numbers used here in place of names corresponded to the coded values for each district in the data set.

Although the previous tables do not break down the data from the largest district by region, there are separate data sources for this district which do provide regional breakdowns. For example, the racial and ethnic characteristics of the student population of the district have been described in yearly summaries for a number of years. The following tables (Tables 15 through 19) provide the number and percent of pupils by racial/ethnic group and educational setting for each of the five regions of the largest district which participated in the present investigation. In all cases, the largest minority group in these districts is Hispanic, ranging from about 40% to over 90%.

Changing Demographics

One of the primary reasons for focusing on large urban districts in the Southern California area for this study was the fact that these districts have been faced with rapidly changing demographics. For example, large urban centers in the Southern California area at present serve as initial points of entry for immigrants and recent arrivals to the United States. However, the changing demographics have also been affected by the movement of families to suburban areas. This combination of patterns of movement has resulted in a high percentage of minority individuals within urban districts, and therefore the challenges of providing educational services to LEP special education students are most pressing in these areas. The following data from the largest district in the study, contained in Table 20, illustrate the rapid shift in the ethnic characteristics of the school population, providing a ten year comparison between Hispanic and White, Non-Hispanic enrollments.

Table 15

Combined Racial and Ethnic Survey Fall 1983: District 05*

	District 05 Totals										
Pupil	American Indian Alaskan Native		Black, Not of Hispanic Origin		Asian/Pacific Islander		Hispanic		White, Not of Hispanic Origin		Total
Schools of Choice	18	0.8%	677	31.9%	238	11.2%	348	16.4%	844	39.7%	2,125
Elementary Schools	85	0.3%	6,105	19.3%	3,904	12.3%	14,739	46.5%	6,851	21.6%	31,684
Junior High Schools	111	0.8%	3,897	26.4%	1,941	13.2%	5,372	36.4%	3,422	23.2%	14,743
Senior/Opportunity High School	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Continuation High School	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Total Pupil	214	0.4%	10,679	22.0%	6,083	12.5%	20,459	42.1%	11,117	22.9%	48,552

*Note: District numbers used here in place of names corresponded to the coded values for each district in the data set.

Table 16

Combined Racial and Ethnic Survey Fall 1983: District 06*

	District 06 Totals										
Pupil	American Indian Alaskan Native		Black, Not of Hispanic Origin		Asian/Pacific Islander		Hispanic		White, Not of Hispanic Origin		Total
Schools of Choice	62	1.8%	584	16.5%	603	17.1%	667	18.9%	1,620	45.8%	3,536
Elementary Schools	97	0.3%	3,059	8.9%	1,743	5.1%	17,851	52.0%	11,556	33.7%	34,306
Junior High Schools	129	0.7%	2,707	14.4%	1,514	8.1%	6,882	36.6%	7,550	40.2%	18,782
Senior/Opportunity High School	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Continuation High School	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Total Pupil	288	0.5%	6,350	11.2%	3,860	6.8%	25,400	44.9%	20,726	36.6%	56,624

*Note: District numbers used here in place of names corresponded to the coded values for each district in the data set.

Table 17

Combined Racial and Ethnic Survey Fall 1983: District 07*

	District 07 Totals										
Pupil	American Indian Alaskan Native		Black, Not of Hispanic Origin		Asian/Pacific Islander		Hispanic		White, Not of Hispanic Origin		Total
Schools of Choice	1	0.2%	82	14.4%	78	14.7%	286	53.9%	84	15.8%	531
Elementary Schools	33	0.1%	511	1.3%	2,180	6.1%	35,811	91.6%	380	1.0%	39,115
Junior High Schools	10	0.1%	226	1.8%	255	2.0%	11,971	95.3%	104	0.8%	12,566
Senior/Opportunity High School	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Continuation High School	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Total Pupil	44	0.1%	819	1.6%	2,713	5.2%	48,068	92.1%	568	1.1%	52,212

*Note: District numbers used here in place of names corresponded to the coded values for each district in the data set.

Table 18

Combined Racial and Ethnic Survey Fall 1983: District 08*

	District 08 Totals										
Pupil	American Indian Alaskan Native		Black, Not of Hispanic Origin		Asian/Pacific Islander		Hispanic		White, Not of Hispanic Origin		Total
Schools of Choice	9	1.6%	122	21.2%	49	8.5%	178	30.9%	218	37.8%	576
Elementary Schools	90	0.2%	726	2.0%	6,159	16.9%	25,833	70.8%	3,686	10.1%	36,494
Junior High School	39	0.3%	342	2.9%	2,262	18.9%	8,370	69.9%	960	8.0%	11,973
Senior/Opportunity High School	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Continuation High School	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Total Pupil	138	0.3%	1,190	2.4%	8,470	17.3%	34,381	70.1%	4,864	9.9%	49,043

*Note: District numbers used here in place of names corresponded to the coded values for each district in the data set.

Table 19

Combined Racial and Ethnic Survey Fall 1983: District 09*

Pupil	American Indian Alaskan Native		Black, Not of Hispanic Origin		Asian/Pacific Islander		Hispanic		White, Not of Hispanic Origin		Total
	District 09 School Division										
School of Choice	24	0.4%	2,353	43.1%	578	10.6%	1,368	25.1%	1,131	20.7%	5,454
Elementary Schools	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Junior High Schools	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Senior/Opportunity High School	397	0.3%	26,197	22.5%	10,067	8.6%	48,129	41.3%	31,757	27.2%	11,547
Continuation High School	17	0.5%	803	24.3%	95	2.9%	1,052	31.8%	1,341	40.5%	3,308
Total Pupil	438	0.3%	29,353	23.4%	10,740	8.6%	50,549	40.3%	34,229	27.3%	125,309

Table 20

Racial/Ethnic Proportions of Districts 05-09* Enrollment, Grades K-12

Year and School Level	Hispanic		White Non-Hispanic Origin	
1973				
Junior & Senior High	61,116	21.7%	136,765	48.6%
Elementary	94,074	28.9%	133,003	40.8%
Total	155,190	25.6%	269,768	44.4%
1974				
Junior & Senior High	64,558	23.3%	127,449	46.1%
Elementary	101,834	31.7%	123,465	38.4%
Total	166,392	27.8%	250,914	41.9%
1975				
Junior & Senior High	67,369	24.7%	121,084	44.3%
Elementary	110,183	33.9%	119,703	36.8%
Total	177,552	29.7%	240,787	40.2%
1976				
Junior & Senior High	71,008	26.1%	113,244	41.7%
Elementary	119,355	37.2%	106,115	33.1%
Total	190,363	32.1%	219,359	37.0%
1977				
Junior & Senior High	75,130	28.0%	103,904	38.7%
Elementary	127,042	40.9%	90,904	29.3%
Total	202,172	34.9%	194,808	33.7%

Table 20 (continued)

Year and School Level	Hispanic		White Non-Hispanic Origin	
1978				
Junior & Senior High	77,686	30.6%	90,501	35.6%
Elementary	133,411	46.3%	60,756	21.3%
Schools of Choice	1,437	14.9%	4,292	44.6%
Total	212,534	38.5%	163,912	29.7%
1979				
Junior & Senior High	80,905	33.1%	80,425	32.9%
Elementary	143,186	50.1%	60,756	21.3%
Schools of Choice	1,856	15.0%	5,354	43.2%
Total	225,947	41.6%	146,535	27.0%
1980				
Junior & Senior High	88,171	36.8%	71,429	29.8%
Elementary	151,129	54.1%	49,680	17.8%
Schools of Choice	2,530	16.0%	6,172	39.1%
Total	241,830	45.2%	127,281	23.8%
1981				
Junior & Senior High	93,960	39.5%	66,710	28.0%
Elementary	158,221	56.2%	48,059	17.1%
Schools of Choice	2,785	16.9%	5,960	36.1%
Total	254,966	47.6%	120,729	22.5%

Table 20 (continued)

Year and School Level	Hispanic		White Non-Hispanic Origin	
1982				
Junior & Senior High	99,595	41.5%	64,579	26.9%
Elementary	163,582	57.4%	47,209	16.6%
Schools of Choice	3,781	19.8%	6,332	33.1%
Total	266,958	49.1%	118,120	21.7%
1983				
Junior & Senior High	105,136	44.3%	50,153	25.2%
Elementary	169,022	58.5%	46,117	16.0%
Schools of Choice	4,431	19.2%	7,694	33.4%
Total	278,589	50.5%	113,964	20.7%

*Note: District numbers used here in place of names corresponded to the coded values for each district in the data set.

Note: Figures from 1972-1977 include alternative schools under the Elementary School disignation. Beginning in 1978, alternative schools and magnet schools are designated as Schools of Choice.

Table 21

Certificated School Staff by Educational Setting

Setting	Ethnic Group			
	Hispanic		White	
Children's Centers	34	8.6%	115	29.1%
Schools of Choice	47	4.9%	639	65.3%
Elementary Schools	1,157	9.3%	7,345	59.0%
Junior High Schools	472	8.5%	3,662	66.0%
Senior/Opportunity High School	495	9.6%	3,434	66.8%
Continuation High Schools	5	3.1%	105	64.4%
Special Education Schools	18	3.7%	339	69.0%
Total	2,228	8.9%	15,639	69.0%

Table 22

Number of Pupils and Staff by Ethnicity in Special Education Schools

Setting	Ethnicity			
	Hispanic		White	
Pupils	2,100	43.2%	1,294	26.6%
Staff				
Full-time Certificated	18	3.7%	339	69.0%
Part-time Certificated	1	0.8%	103	81.1%
Full-time Classified	40	21.7%	51	27.7%
Part-time Classified	110	20.4%	207	38.5%
Total Staff	169	12.6%	700	52.2%

Table 23

Ethnicity of School Staff and Pupils by District

Designation	Ethnicity			
	Hispanic		White	
District 05*				
Pupils	20,459	42.1%	11,117	22.9%
Staff				
Full-time Certificated	130	6.1%	1,328	62.2%
Part-time Certificated	2	0.8%	180	69.8%
Full-time Classified	43	12.3%	96	27.4%
Part-time Classified	455	34.9%	362	27.7%
District 06				
Pupils	25,400	44.9%	20,726	36.6%
Staff				
Full-time Certificated	206	8.7%	1,768	74.4%
Part-time Certificated	6	1.8%	329	96.8%
Full-time Classified	84	18.2%	249	54.0%
Part-time Classified	369	34.3%	581	54.0%
District 07				
Pupils	48,068	92.1%	568	1.1%
Staff				
Full-time Certificated	503	21.1%	1,306	54.9%
Part-time Certificated	31	13.7%	159	70.0%
Full-time Classified	263	64.0%	36	8.8%
Part-time Classified	2,157	81.2%	203	7.6%

Table 23 (continued)

Designation	Ethnicity			
	Hispanic		White	
District 08				
Pupils	34,381	70.1%	4,864	9.9%
Staff				
Full-time Certificated	249	11.4%	1,347	61.8%
Part-time Certificated	2	0.9%	192	82.4%
Full-time Classified	122	35.2%	61	17.6%
Part-time Classified	889	55.9%	327	20.6%
District 09				
Pupils	50,549	40.3%	34,229	27.3%
Staff				
Full-time Certificated	521	9.4%	3,698	66.6%
Part-time Certificated	14	5.4%	208	80.6%
Full-time Classified	215	7.7%	382	31.4%
Part-time Classified	598	33.8%	500	28.3%

*Note: District numbers used here in place of names corresponded to the coded values for each district in the data set.